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# 12<sup>th</sup> EAOHP Conference

*Occupational Health Psychology in Times  
of Change: Society and the Workplace*

## BOOK OF PROCEEDINGS

Edited by:

Kevin Teoh  
Vlad Dediu  
Nathalie Jean Saade  
Juliet Hassard

# BOOK OF PROCEEDINGS

12<sup>th</sup> Conference of the European Academy of Occupational Health Psychology  
*'OHP in Times of Change: Society and the workplace'*

**Edited by:**

**Kevin Teoh  
Vlad Dediu  
Nathalie Jean Saade  
Juliet Hassard**



**European Academy of Occupational Health Psychology**

European Academy of Occupational Health Psychology  
Level B, Yang Fujia Building, Jubilee Campus, Wollaton Road  
Nottingham, NG8 1BB, United Kingdom

NOTTINGHAM

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## PREFACE

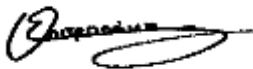
The European Academy of Occupational Health Psychology in collaboration with Aristotle University of Thessaloniki and ALBA Graduate Business School welcomes you to Athens, the 'Historical Capital of the World', where its 12<sup>th</sup> conference is hosted.

The Academy's first conference took place in 1999 to provide a new platform to promote the development of research, education and practice in the then emerging field of occupational health psychology. That inaugural event was held in Lund, Sweden. In the intervening years, conferences have been held successfully in Nottingham, UK (2000), Barcelona, Spain (2001), Vienna, Austria (2002), Berlin, Germany (2003), Porto, Portugal (2004), Dublin, Ireland (2006), Valencia, Spain (2008), Rome, Italy (2010), Zürich, Switzerland (2012), and most recently London, UK (2014). We are delighted to have been able to organise this 12<sup>th</sup> Academy conference in Athens and this has in no small part been possible due to the financial and practical support provided by the collaborative institutions, the Division of Work & Organizational Psychology of the Hellenic Psychological Society and our national and international sponsors.

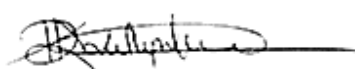
The theme for this year's conference is 'OHP in times of change: Society and the workplace'. In a world that is in constant flux and crises of many forms (financial, humanitarian, geopolitical and organizational) have become the norm, employees' health and well-being pay a high toll. In this changing context, occupational health psychology has a critical role to play. The conference will address what occupational health researchers and practitioners can do to prevent psychological risks but also, and most importantly, build resourceful and resilient environments in which people can not only survive but thrive and flourish despite adversity. To this end, the conference has a powerful and engaging schedule of keynote, oral and poster presentations, as well as special sessions.

At each conference, the Academy awards a lifetime fellowship to individuals, who in the opinion of the Executive Committee, have made an exceptional contribution to the discipline of occupational health psychology. This year we are proud to welcome Prof. Maureen Dollard (University of South Australia), Prof. Joan Benach (GREDS-EMCONET and Pompeu Fabra University), and, posthumously, Dr. Eusebio Rial-Gonzalez into our College of Fellows.

On behalf of the Organising Committee, we would like to thank you for contributing to this conference. We hope it will meet your expectations and will stoke up your enthusiasm. We continue in our commitment to build a members' Academy and will always welcome those who wish to be actively involved going forward. Finally, we would like to thank all of those who have given so generously of their time in helping to make this event a reality.



Olga Epitropaki  
Conference Co-Chair



Despoina Xanthopoulou  
Conference Co-Chair



Sergio Iavicoli  
President, EAOHP

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## SPONSORS & SUPPORTING INSTITUTIONS

The following have  
generously supported the 12<sup>th</sup> conference of the  
European Academy of Occupational Health Psychology



**Business unusual**  
at The American College of Greece



*Ιστορία μέλλοντος*

## DELEGATE FACILITIES

### Venue

The Conference will be held at Royal Olympic Hotel, Athens. The venue located in central Athens, overlooks the Acropolis and the temple of Zeus. It is a two minute walk from the nearest metro station and well connected by public transport.

The closest metro station is Acropoli.

**Address:** Athanasiou Diakou 28, Athens, Greece 117 43, Greece

### Getting there

#### ***By Car and Taxi***

It takes 25 minutes by car to reach the hotel from the Athens International Airport. There is limited parking space available at the Royal Olympic Hotel. Public parking is also available nearby.

#### ***By Metro***

The approximate time from the Athens International Airport to the Hotel is 30 minutes. To get to the Hotel via Metro, please proceed to the Airport Station and change at Syntagma Station. At Syntagma Station take the red line in the direction of Ag. Dimitrios and get off at the first Station, the "Acropolis Station". From Acropolis Station the Hotel is 100m away, walking along Athanasiou Diakou Street.

### Internet access

Complimentary wireless internet available at the Royal Olympic Hotel. For any queries please visit the conference registration desk.

### Catering

Lunch is included in the delegate fee and refreshments will be available at no cost each morning and afternoon of the conference.

### Exhibition stands

During the conference, you are invited to visit the exhibition stands located in the Olympic Hall Foyer. Books and journals relevant to occupational health psychology from Taylor & Francis, Wiley-Blackwell, and Springer will be available.

### Conference app

The conference app is available for iOS and Android users. Search 'EAOHP' on the Apple Store and Google Play to download the conference app on your device.

## Presentations (Author Guidelines)

**ORAL:** Each presentation will last 15 minutes including time for questions. The session chair will introduce each presenter and ensure that presentations are kept to time. All oral presentations must be supported by Microsoft Power Point. Presentations should be on a USB stick and clearly labelled with (i) the name of the lead author, (ii) title of presentation and (iii) day, time and room number of the presentation. Please take your presentation directly to the room allocated for your presentation, where you will be assisted in copying it onto the system, prior to the start of your session.

**POSTER:** The poster should ideally be printed in AO size: 119cm (H) X 84cm (W) in **portrait format** [maximum size should not exceed 180cm (H) X 100cm (W)] (the posters will be placed on poster boards as shown in the adjacent image).

Authors for poster presentations should bring their posters to the conference venue on the day of the presentation. Tape will be provided. All authors are responsible for placing their own posters according to their assigned numbers and will be assisted by the conference organizing team.

## Additional information

**EAOHP Evening reception – Welcome to Athens:** An evening drinks reception has been organised on Monday, April 11<sup>th</sup> from 18:45 – 20:30, at the Roof Garden of the Royal Olympic Hotel. Please join us for drinks and canapés as well as great views of the Parthenon and the temple of Zeus.

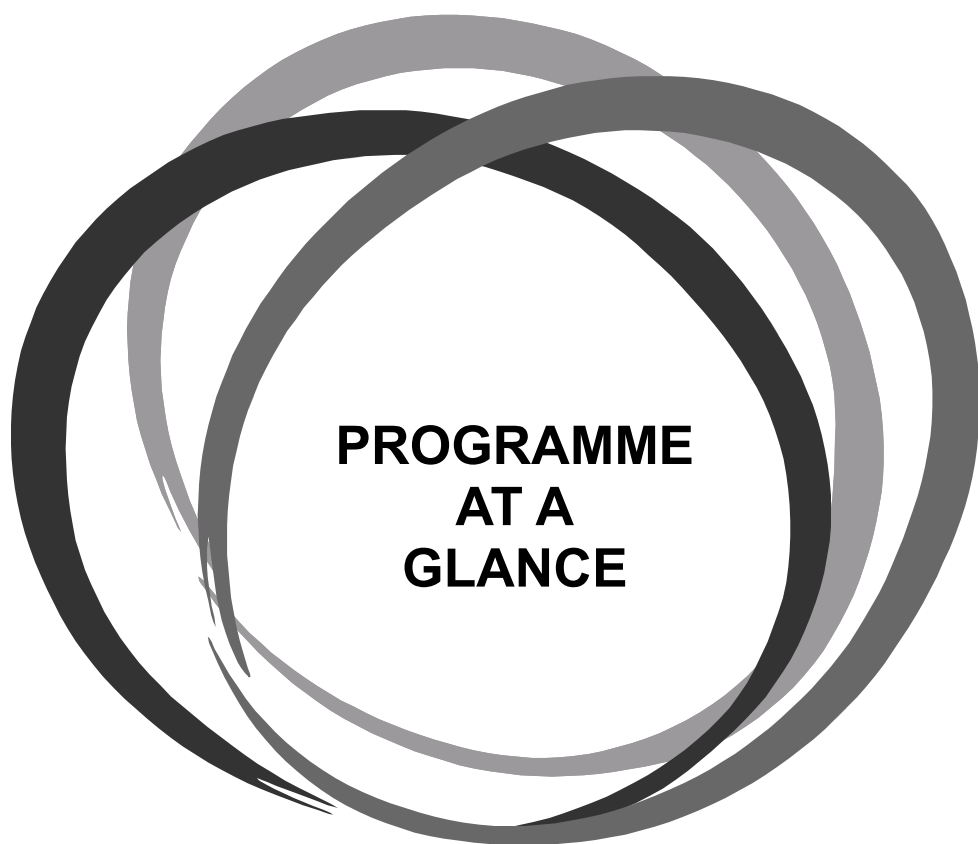
**Conference dinner -** The conference dinner has been organised at the Orizontes Restaurant, Lycabettus Hill, Athens. The hill of Lycabettus is the highest peak of Athens, which overlooks the capital from 277 meters. It stands out for its panoramic view of the city. The most beautiful images fill the eyes of every visitor, facing the Acropolis to Piraeus and the Saronic Gulf. At this point, Orizontes is one of the best restaurants of the city of Athens.

Orizontes Restaurant offers its guests a journey of colours and a plethora of aromas of contemporary Mediterranean cuisine. The renewed menu draws inspiration from numerous Greek recipes using only the finest of ingredients. Known for its distinctive sophisticated service, high quality dishes, the freshness of the ingredients, and creativity, the restaurant offers a carefully designed wine list including Greek labels and a selective range of wines from around the world justly earning the trust and applause from those coming back to this spectacular place.

If you have reserved a place, please ensure that you have received your ticket for the dinner (which includes the funicular ticket to and from the hill) from the reception desk.

## Further assistance

Should you require any assistance during the conference, please don't hesitate to contact a member of the conference organizing committee at the reception desk.



## Monday, 11/04/2016

- 08:00 - 09:00 **Registration**  
*Olympia Hall Foyer*
- 09:00 - 09:45 **Opening ceremony**  
*Olympia Hall*
- 09:45 - 10:30 EAOHP Fellowship Keynote Address: Employment precariousness: The need to understand and change an emerging social determinant of health  
*Olympia Hall*
- 10:30 - 11:00 **Coffee**  
*Olympia Hall Foyer*
- 11:00 - 12:30 Symposium: Surviving the financial recession in Greece: Empirical evidence on crisis-related factors for employee well-being  
*Olympia Hall*
- Symposium: Wellbeing and work-life balance in the emergency and security services  
*Panorama Hall*
- Symposium: Boundary management and smart technology in boundaryless working environments  
*Attika Hall*
- Oral session: Occupational health psychology and safety  
*Conference Room Ground*
- Oral session: Burnout: Antecedents and consequences I  
*Conference Room 1*
- Oral session: Focus on occupational groups  
*Conference Room 2*
- 12:30 - 14:00 **Lunch and Poster Session**  
*Kallirroë Hall*
- Poster session: Engagement, motivation and performance
- Poster session: Job satisfaction and wellbeing
- Poster session: Organisational interventions
- Poster session: Occupational health psychology methodology
- Poster session: Stress and well-being
- Poster session: Work-life balance
- Poster session: Policy, practice and consulting
- Poster session: Occupational health psychology and safety
- 12:45 - 14:00 **ICG-OHP Meeting (by invitation only)**  
*Attika Hall*

- 14:00 - 15:15 Symposium: From work intensification to well-being: Disentangling the paths for recovery  
*Olympia Hall*
- Oral session: Work-life balance and work-family conflict I  
*Panorama Hall*
- Oral session: Workers' physical health and functioning  
*Attika Hall*
- Oral session: Temporary employment and job insecurity  
*Conference Room Ground*
- Oral session: Leadership style and management I  
*Conference Room 1*
- Oral session: Organisational development and change I  
*Conference Room 2*
- 15:15 - 15:45 **Coffee**  
*Olympia Hall Foyer*
- 15:45 - 17:15 Symposium: Job insecurity - Part 1: Antecedents and consequences of job insecurity  
*Olympia Hall*
- Symposium: Recent developments in workplace bullying - Part 1: New forms and insights in the bullying phenomenon  
*Panorama Hall*
- Special Session: Management of psychosocial risks and work-related stress: National experiences based on the Management Standards approach and the way forward in Europe  
*Attika Hall*
- Oral session: Individual differences and work outcomes I  
*Conference Room Ground*
- Oral session: Antecedents of stress and well-being I  
*Conference Room 1*
- Oral session: Mental health and the workplace I  
*Conference Room 2*
- 17:15 - 18:30 Symposium: Job insecurity - Part 2: Mediation and moderation, with a focus on non-West European countries  
*Olympia Hall*
- Symposium: Recent developments in workplace bullying - Part 2: Advanced studies on antecedents and moderators  
*Panorama Hall*
- DOP Symposium: Women, work and wellbeing: support during challenging times  
*Conference Room Ground*
- Oral session: Job crafting  
*Attika Hall*

Oral session: Mental health and the workplace II  
*Conference Room 1*

Oral session: Resilience and wellbeing at work I  
*Conference Room 2*

18:45 - 20:30 EAOHP Evening Reception  
*Roof Garden, Royal Olympic Hotel*

## **Tuesday, 12/04/2016**

08:00 - 08:30 **Registration**  
*Olympia Hall Foyer*

08:30 - 09:30 Symposium: Stress at work 2015 - Part 1: Concepts, results, practical implications of (inter)national collaborations  
*Olympia Hall*

Symposium: Dealing with psychological trauma in the workplace  
*Panorama Hall*

Symposium: On- and off-job activities: The key to successful recovery  
*Attika Hall*

Symposium: The person-oriented approach to job burnout  
*Conference Room Ground*

Oral session: Psychometrics in occupational health psychology I  
*Conference Room 1*

Oral session: Work engagement and performance I  
*Conference Room 2*

09:30 - 10:45 Symposium: Stress at work 2015 - Part 2: Concepts, results, practical implications of (inter)national collaborations  
*Olympia Hall*

Symposium: Leading to well-being  
*Panorama Hall*

Oral session: Workplace violence, bullying and harassment I  
*Attika Hall*

Oral session: Burnout: Antecedents and consequences II  
*Conference Room Ground*

Oral session: Organisational development and change II  
*Conference Room 1*

Oral session: Antecedents of stress and well-being II  
*Conference Room 2*

10:45 - 11:00 **Coffee**  
*Olympia Hall Foyer*



- 11:00 - 12:15 Symposium: Understanding job crafting - Part 1: Underlying mechanisms, boundary conditions and crossover effects  
*Olympia Hall*
- Symposium: Future policy development on psychosocial risks and mental health at work in the European Union  
*Panorama Hall*
- Symposium: Interpersonal mistreatment at work: Measurement issues  
*Attika Hall*
- Symposium: Risks and resources associated with burnout across occupations and countries  
*Conference Room Ground*
- Oral session: Workplace health promotion  
*Conference Room 1*
- Oral session: Age and work  
*Conference Room 2*
- 12:15 - 13:00 EAOHP Distinguished Keynote Address: The challenge of burnout in contemporary society  
*Olympia Hall*
- 13:00 - 14:30 **Lunch**  
*Olympia Hall Foyer*
- 13:15 - 14:30 Meet the Editors Session  
*Olympia Hall*
- Practitioner Focus Session: Policing and Wellbeing  
*Panorama Hall*
- 14:30 - 16:00 Symposium: Understanding job crafting - Part 2: Underlying mechanisms, boundary conditions and crossover effects  
*Olympia Hall*
- Symposium: Mining mental health in Canada  
*Panorama Hall*
- Symposium: Resilience in the workplace: How personal resources contribute to resilience and psychological well-being  
*Attika Hall*
- Oral session: Organisational interventions and outcomes  
*Conference Room Ground*
- Oral session: Presenteeism and sickness absence  
*Conference Room 1*
- Oral session: Work and recovery  
*Conference Room 2*
- 16:00 - 16:15 **Coffee**  
*Olympia Hall Foyer*

- 16:15 - 17:30 Symposium: Assessing and addressing the psychosocial factors that impact the workplace  
*Olympia Hall*
- Symposium: Presenteeism: Moving the field forward  
*Panorama Hall*
- Oral session: Occupational health psychology policy and practice  
*Attika Hall*
- Oral session: Resilience and wellbeing at work II  
*Conference Room Ground*
- Oral session: Work-life balance and work-family conflict II  
*Conference Room 1*
- Oral session: Work engagement and performance II  
*Conference Room 2*
- 19:00 **Conference Dinner**  
*Orizontes Restaurant*

## Wednesday, 13/04/2016

- 08:00 - 08:30 **Registration**  
*Olympia Hall Foyer*
- 08:30 - 09:30 Symposium: Psychosocial safety climate: how organisational contexts can protect worker health and promote productivity - Part 1: Qualitative and quantitative evidence of PSC theory  
*Olympia Hall*
- Symposium: Psychosocial risks and employee well-being: Total Worker Health policy implications  
*Panorama Hall*
- Symposium: Leadership – gaining shared understanding in interventions  
*Attika Hall*
- Symposium: The partnership model for research in workers' health: A novel method for ensuring a sustainable working life  
*Conference Room Ground*
- Oral session: Outcomes of working conditions  
*Conference Room 1*
- Oral session: Creativity and innovative behaviour  
*Conference Room 2*
- 09:30 - 10:45 Symposium: Psychosocial safety climate: how organisational contexts can protect worker health and promote productivity - Part 2: Practical applications and macro-level implications of PSC  
*Olympia Hall*
- Practice Forum: Occupational health psychology practices in times of austerity  
*Panorama Hall*

Symposium: Participative prevention of psychosocial emergent risks in small and medium enterprises: Overview of a collaborative project  
*Attika Hall*

Symposium: Work-life balance  
*Conference Room Ground*

Symposium: Work engagement: More than just engaging with work  
*Conference Room 1*

Oral session: Mental health and the workplace III  
*Conference Room 2*

10:45 - 11:00 **Coffee**  
*Olympia Hall Foyer*

11:00 - 12:15 Symposium: The work-family interface as a complex construct: Basic processes and influencing factors  
*Olympia Hall*

Research Forum: Doctoral, Masters students and young researcher showcase  
*Panorama Hall*

Symposium: Revisiting the psychological experience and consequences of unemployment  
*Attika Hall*

Oral session: Leadership style and management II  
*Conference Room Ground*

Oral session: Individual differences and work outcomes II  
*Conference Room 1*

Oral session: Inequalities in working conditions and health  
*Conference Room 2*

12:15 - 13:00 Work & Stress – Routledge Keynote Address: Getting to grips with organizational interventions: What works for whom under which circumstances?  
*Olympia Hall*

13:00 - 14:30 **Lunch and Poster Session**  
*Kallirroë Hall*

Poster session: Diversity at work

Poster session: Burnout

Poster session: Mental health and the workplace

Poster session: Work engagement and positive organisational behaviour

Poster session: Workplace health promotion

Poster session: Working conditions and resilience

13:15 - 14:15 **Business Meeting (open to public)**  
*Attika Hall*

- 14:30 - 15:30 Symposium: The “always on culture”— implications for recovery and work-life balance  
*Olympia Hall*
- Symposium: Relating context, process and outcome evaluation of organizational health interventions  
*Panorama Hall*
- Oral session: Intervention evaluation  
*Attika Hall*
- Oral session: Workplace violence, bullying and harassment II  
*Conference Room Ground*
- Oral session: Emotions at work  
*Conference Room 1*
- Oral session: Burnout: Antecedents and consequences III  
*Conference Room 2*
- 15:30 - 15:45 **Coffee**  
*Olympia Hall Foyer*
- 15:45 - 16:45 Symposium: “First, Do No Harm”: Examining antecedents and consequences of different sources of aggression in the workplace  
*Olympia Hall*
- Symposium: Occupational health psychology and sustainability - furthering the research agenda  
*Panorama Hall*
- Oral session: Psychometrics in occupational health psychology II  
*Attika Hall*
- Oral session: Psychosocial interventions  
*Conference Room Ground*
- Oral session: Diversity at work  
*Conference Room 1*
- Oral session: Working hours and time pressure  
*Conference Room 2*
- 16:45 - 17:30 **Closing Ceremony**  
*Olympia Hall*
- 17:30 - 18:30 Open Meeting: Resources in Occupational Health Psychology  
*Panorama Hall*



## Monday, 11 April 2016

### Registration

08:00 - 09:00 Olympia Hall Foyer

### Opening ceremony

9:00 - 09:45 Olympia Hall

### EAOHP Fellowship Keynote Address: Employment precariousness: The need to understand and change an emerging social determinant of health

09:45 - 10:30 Olympia Hall

Chair: Stavroula Leka

K1 Employment Precariousness: The Need to Understand and Change an Emerging Social Determinant of Health  
*Joan Benach*

### Coffee

10:30 - 11:00 Olympia Hall Foyer

### Symposium: Surviving the financial recession in Greece: Empirical evidence on crisis-related factors for employee well-being

11:00 - 12:30 Olympia Hall

Chair: Despoina Xanthopoulou

- S1 Exploring the Impact of the Crisis on Employment Relationships in Greece  
*Ioannis Nikolaou*
- S2 Perceived Employability and Employee Stress, Depression and Meaning in Life: A Moderated-Mediated Model  
*Olga Epitropaki*
- S3 Employee Attitudes and Burnout in Times of Economic Crisis  
*Yannis Markovits, Diana Boer, Sibylle Gerbers, Rolf Van Dick*
- S4 Justice, Pay Satisfaction and Affective Well-being in the Greek public Sector in Time of Crisis: The Mediating Role of Autonomous Motivation  
*Konstantinos Papachristopoulos*  
*Hellenic Army Academy, Athens, Greece*
- S5 Organisational Justice Matters for Employee functioning in Changing Environments: A Study of Greek Organisations in Times of Financial Recession  
*Despoina Xanthopoulou, Panagiotis Gkorezis, Victoria Bellou, Eugenia Petridou*
- S6 Managing Change through Leader's Cultural and Personal Values: The Case of Apivita  
*Maria Vakola, Dimitris Bourantas, Marina Karli*

## Symposium: Wellbeing and work-life balance in the emergency and security services

11:00 - 12:30 Panorama Hall

Chair: Gail Kinman

- S7 Effort Reward Imbalance, Over-Commitment and Burnout amongst Humanitarian Aid Workers  
*Liza Jachens, Jonathan Houdmont*
- S8 Job Demands and Work-life Conflict in UK Prison Officers: The Role of Recovery Experiences  
*Gail Kinman, Andrew Clements, Jacqui Hart*
- S9 Job Demands and Resources, Recovery Strategies and Work-life Outcomes in UK Fire and Rescue Service Operational Staff  
*Nicola Payne, Gail Kinman, Emma Hughes*
- S10 Working Conditions and Work-life Balance within the Armed Forces: the Importance of Gender and Rank  
*Clare Lyonette, Sally-Anne Barnes, Natalie Fisher, Karen Newell*
- S11 Work-life Balance Challenges in the Police  
*Almuth McDowall*

## Symposium: Boundary management and smart technology in boundaryless working environments

11:00 - 12:30 Attika Hall

Chair: Wido G.M. Oerlemans

- S12 Individual and Organizational Antecedents of Boundary Management Behavior - from the Perspective of Theory of Planned Behaviour  
*Esther Palm, Christian Seubert, Jürgen Glaser*
- S13 'Work Warrior' or 'Fusion Lover'? - Boundary Management Profiles and Psychomental Health  
*Bettina Lampert, Esther Palm, Christian Seubert, Jürgen Glaser*
- S14 Still not Working from Home? Personal, Organisational and Social Aspects Undermining the Use of Flexible Work Arrangements  
*Matea Paškván, Bettina Kubicek*
- S15 Work-related Smartphone Use and Daily Recovery from Work: The Role of Motivation and Smartphone Addiction  
*Wido Oerlemans, Evangelia Demerouti, Pareskevas Petrou, Piet Van Gool*
- S16 Switching Off?! A Longitudinal Study on the Role of Communication Media Use for Recovery During Vacations  
*Carmen Binnewies, Eva Brosch, Christopher Gröning*
- S17 Recovery in Elite Sport: The Role of Pleasure and Effort during Leisure Time Activities on Subjective and Objective Recovery Outcomes  
*Yannick Balk, Jan De Jonge, Wido Oerlemans, Sabine Geurts*

## Oral session: Occupational health psychology and safety

11:00 - 12:30 Conference Room  
Ground

Chair: Raymond Randall

- O1 To Adhere or Not to Adhere: A Typology For Understanding Healthcare Providers' Adherence to Safety Protocols  
Anat Drach-Zahavy, Anit Somech, Larisa Boim
- O2 The Influence of Safety Experts' Cooperation on Accident Severity  
Johanna Bunner, Christian Korunka
- O3 Safety and Well-Being: An Integrated Model Predicting Safety Behaviours  
Julie Laurent, Nik Chmiel, Isabelle Hansez
- O4 How to Measure Safety Climate in Health Care Sector. An Adaptation of the Integrated Safety Climate Questionnaire  
Margherita Brondino, Margherita Pasini, Luciano Romeo, Giampietro Rizzo
- O5 Taking Work Home With You: The Impact of Work-related Rumination on Risky Commuting Safety Behaviors  
Katrina Burch, Janet Barnes-Farrell

## Oral session: Burnout: Antecedents and consequences I

11:00 - 12:30 Conference Room 1

Chair: Arnold Bakker

- O6 Stressful Relationships with Customers and Burnout: The Mediating Role of Emotional Labor  
Dorota Szczygieł
- O7 Is Burnout Predicted by Job Stress? A Two-Wave One-Year Study  
Renzo Bianchi, Irvin Sam Schonfeld, Eric Laurent
- O8 Personal and Organizational Antecedents of Burnout: A Clinical Study  
Benjamin Stollreiter, Ralf Lanwehr, Harald Fiedler, Rafael Wilms
- O9 Burnout in Doctors Working with Palliative Care Patients: Systematic Review  
Asta Medisauskaite, Caroline Kamau
- O10 Burnout and Depressive Symptoms in Latent Group Analyses: An Exploratory Study  
Leon de Beer

## Oral session: Focus on occupational groups

11:00 - 12:30 Conference Room 2

Chair: Andrew Weyman

- O11 Creating a Meta-Analytically and Qualitatively Informed Instrument for Lost-Time Injury, Illness, and Disability in Nurses and Health Care Aides  
Basem Gohar, Michel Larivière, Nancy Lightfoot, Elizabeth Wenghofer, Justin Desroches, Céline Larivière



- O12 The Perils of the Power Track: Long Hours and Work-Life Conflict Among Lawyers  
*Jonathan Koltaj, Scott Schieman, Ronit Dinovitzer*
- O13 SMaRT Work: Stand More AT Work. The Development of Behaviour Change Strategies for Increasing Standing and Movement Among Sedentary Office Workers  
*Fehmidah Munir, Ben Jackson, Sophie O'Connell, Charlotte Edwardson, Stuart Biddle, Melanie Davies, David Dunstan, Dale Eslinger, Laura Gray, Paul Miller, Tom Yates*
- O14 Task-related and Socio-emotional Aspects of Communication in the Operation Room as Predictors (a) of Patient Outcomes, (b) of Surgeons' Predictions of Patient Outcomes, and (c) of Surgeons' Evaluations of Teamwork Quality  
*Norbert Semmer, Franziska Tschan, Sandra Keller, Eliane Holzer, Daniel Candinas, Guido Beldi*
- O15 The Effects of Job Demands on Police Officer Wellbeing: The Mediating Role of Job Burnout  
*Lukasz Baka*
- O16 Epidemiology and management of occupational stress and musculoskeletal disorders in Cypriot firefighters  
*Andrea Nikolaou, Stavroula Leka, George Spanoudis, Lilia Psalta, Elpidoforos Soteriades*

## **Lunch and Poster Session**

**12:30 - 14:00 Kallirroe Hall**

## **Poster session: Engagement, motivation and performance**

**12:30 - 14:00 Kallirroe Hall**

- P1 Balancing Performance and Employee Well-being Across Distances: A New Tool to Distance Managers  
*Christine Ipsen, Louise Nygaard, Andreas Aabo*
- P2 How does Authentic Leadership Promote Optimal Functioning at Work? The Mediating Role of Employee Motivation  
*Julie Côté, Claude Fernet, Stéphanie Austin*
- P3 Mindfulness and Compassion: The Impact on Engagement and Performance  
*Sandra Miralles Armenteros, Ricardo Chiva Gómez, Alma María Rodríguez Sánchez*
- P4 When does Psychological Detachment from Work During Off-Job time Predict Engagement and Burnout? The Moderating Role of Autonomous Motivation.  
*Stéphanie Austin, Claude Fernet, Julie Côté*
- P5 Is it Possible to Build Work Engagement with Job Resources? A Person-Centered Approach to Interventions  
*Piia Seppälä, Jari Hakanen, Anneli Ojajärvi*

## Poster session: Job satisfaction and wellbeing

12:30 - 14:00 Kallirroe Hall

- P6 Managing the Emotional Demands of Caring: the Role of Trait Mindfulness in Health Care Assistants  
*Stacey Hardacre, Gail Kinman*
- P7 The Impact of Death Reminders in the Workplace on Productivity, Self-Esteem, and Wellbeing: A Terror Management Perspective  
*Simon McCabe*
- P8 Effect of Psychosocial Risks (Mobbing and Burnout) in Job Satisfaction  
*Juana Patlan-Perez*
- P9 Working With The Public: A Diary Study of Beneficiary Contact, Social Worth And The Mediating Effect Of Prosocial Impact among Emergency Workers  
*Brendan McNicholas, Sarah-Jane Cullinane, Janine Bosak*

## Poster session: Organisational interventions

12:30 - 14:00 Kallirroe Hall

- P10 The Moderating Role of Job Control in the Relation between Job Stressors and Counterproductive Work Behaviors: A Study among Italian and Polish Employees  
*Lukasz Baka, Roberta Fida, Claudio Barbaranelli, Dorota Szczygiel*
- P11 Healthy Change Processes - a Diary Study of Five Organizational Units  
*Mathilde Lien, Ingrid Børstad Eriksen, Per Øystein Saksvik*
- P12 Developing Leadership Skills Among Young Adults: A Systematic Review  
*Despoina Karagianni, Anthony Montgomery*
- P13 Intervention Specific Transformational Leadership and its Relationship to the Perceived Fit and Outcomes of a Participatory Intervention  
*Robert Lundmark, Ulrica von Thiele Schwarz, Andreas Stenling, Henna Hasson, Susanne Tafvelin*
- P14 Using Assessments to Understand Workforce Capability  
*Alia Al Serkal*
- P15 Sustainable Employability of Hospital Nurses: Dialogue as Intervention  
*Livia Brouwers, Yvonne Heerkens, Josephine Engels, Allard van der Beek*

## Poster session: Occupational health psychology methodology

12:30 - 14:00 Kallirroe Hall

- P16 Validity and Test-Retest Reliability of Production Loss Assessments  
*Emmanuel Aboagye, Irene Jensen, Gunnar Bergström, Jan Hagberg, Iben Axén, Malin Lohela Karlsson*

- P17 Emotional Intelligence in Nursing Students of a Public University of Guadalajara, México  
*Paula González Sánchez, Gabriela Fernanda Corona Hernández, Gustavo Hernández Chávez, Berenice Hernández Guzmán*
- P18 Validation of a German Version of the Social Components of Retirement Anxiety Scale (SCRAS)  
*Nadine Seiferling, Alexandra Michel, Julia Straube*

## Poster session: Stress and well-being

12:30 - 14:00 Kallirroe Hall

- P19 Effort-Reward Imbalance and Hazardous Alcohol Consumption among Humanitarian Aid Workers  
*Liza Jachens, Jonathan Houdmont, Roslyn Thomas*
- P20 A Naturalistic Multi-level Framework for Studying Transient and Chronic Effects of Psychosocial Work Stressors on Employee Health and Well-being  
*Remus Ilies, Sherry S.Y. Aw, Vivien K.G. Lim*  
*National University of Singapore, Department of Management and Organization, Singapore, Singapore*
- P21 Predictive Psychophysiological Stress Symptoms in Dentists at a Social Security Institution in Mexico  
*Blanca Elizabeth Pozos Radillo, María de Lourdes Preciado Serrano, Ana Rosa Plascencia Campos, Luis Alberto Zaragoza Perales*
- P22 Difficult Customers as a Source of Stress Among Service Workers: The Mediating Role of Negative Emotions  
*Dorota Szczygiel, Lukasz Baka, Jacek Buczny*
- P23 Work-related Resources and Stressors of Kindergarten Teachers  
*Marlies Gude, Sylvie Vincent-Höper, Monika Keller, Maren Kersten, Sabine Gregersen, Albert Nienhaus*
- P24 Techno-Stress, Strain, and Employee Commitment: An Investigation from Work Design and Social Support Theories  
*Crystal Han-Huei Tsay, Tung-Ching Lin*
- P25 Subjective Stress Mediates the Relationship between Meditation, Mindfulness and Well-being: Cross-sectional and Longitudinal Relationships  
*Roberta Szekeres, Eleanor Wertheim*  
*La Trobe University, Melbourne, Victoria, Australia*

## Poster session: Work-life balance

12:30 - 14:00 Kallirroe Hall

- P26 Sleep Disturbance as Mediating Factor Between the Effects of Work-Life Interplay on Musculoskeletal Pain and Headache Complaints  
*Jolien Vleeshouwers*

- P27 Organizational Culture and Work-Life Integration: A Barrier to Employees' Respite?  
*Annie Foucreault, Ariane Ollier-Malaterre, Julie Ménard*
- P28 Work-family Enrichment and Well-Being: Does Age Matter?  
*Hélène Henry, Donatienne Desmette*
- P29 Personality Traits as Moderators between Job Satisfaction and Work-Family Interaction  
*Loreta Gustainiene, Violeta Tupikaite*

## Poster session: Policy, practice and consulting

12:30 - 14:00 Kallirroe Hall

- P30 Burnout and Higher Education: Cases based in Taiwan and Mainland China  
*I-Shuo Chen, Jui-Kuei Chen*
- P31 The Warning System for the Maladaptive Behaviours in the Law Enforcement  
*Eugen Valentin Androsiac*
- P32 Psychosocial, Health Promotion and Safety Culture Management: Are Health and Safety Practitioners Involved?  
*Sara Leitao, Birgit A. Greiner*
- P33 Work Ability as Risk Marker of Worker Health and Organisational Effectiveness: Longitudinal Comparison of the Single-Item Work Ability Score Versus Multi-Item Work Ability Index  
*Karen Coomer, Jonathan Houdmont*
- P34 In the Middle: Managers' Experiences of the Negotiation Between Workers and Workplaces in Cases of Cancer  
*Lucie Kocum, Lynne Robinson, Catherine Loughlin*
- P35 Employers' Perception Related to OHS Management: Differences by Firm Size in an Italian Survey  
*Matteo Ronchetti, Diana Gagliardi, Michela Bonafede, Marisa Corfiati, Fabio Boccuni, Antonio Valenti, Alessandro Marinaccio, Sergio Iavicoli*
- P36 OSH Leveling during Economic Slowdown - The Social Amplification/Attenuation of Risk  
*Ioannis Anyfantis, Georgios Boustras, Alexandros Karageorgiou*

## Poster session: Occupational health psychology and safety

12:30 - 14:00 Kallirroe Hall

- P37 The Impact of Perceived Management and Coworker Safety Priorities on Safety Outcomes  
*Yueng-hsiang Huang, Wen-Ruey Chang, Janelle Cheung, Jin Lee, Anna McFadden, Pete Kines*
- P38 Ignoring it Makes it Worse: Passive Leadership, Work-Family and Workplace Health and Safety  
*Taylor Oakie, E Kevin Kelloway*

- P39 An Exploration of Failure/Accident Attributions and the Potential Implications for Research in Occupational Health Psychology with Psychiatric Nurses  
Justin Desroches, Michel Larivière, Judith Horrigan, Céline Boudreau-Larivière, Zsuzsanna Kerekes
- P40 Work-Related Traumatic Brain Injury in the Canadian Workforce: A Cross-Sectional Study of Injured Workers in Ontario  
Behdin Nowrouzi, Bhanu Sharma, Tatyana Mollayeva, John Lewko, Alex Mihailidis, Gary Liss, Brian Gibson, Mark Bayley, Enzo Garritano, Steve Mantis, Jo-Ann Mcinnis, Laura Pascoe, Pia Kontos, Angela Colantonio
- P41 Safety Culture and Effective Team Structures to Enhance Patient Safety in Mental Health Care Settings  
Andrea Schweiger, Guido Offermanns
- P42 Contribution to the Prevention of Occupational Stress  
Chahrazed Kandouci, Fatiha Baraka, Fethi Mohamed Réda Moulessehouli, Baderdine Abdelkrim Kandouci
- P43 Detrimental Effects of Workplace Bullying: Impediment of Self-Management Competence via Psychological Distress  
Gabriele Giorgi, Milda Perminiene, Francesco Montani, Javier Fiz Perez, Nicola Mucci, Giulio Arcangeli
- P44 Workplace Bullying and the Role of Organizational Practices  
Nina Olin, Maarit Vartia, Krista Pahkin

## ICG-OHP Meeting (by invitation only)

12:45 - 14:00 Attika Hall

## Symposium: From work intensification to well-being: Disentangling the paths for recovery

14:00 - 15:15 Olympia Hall

Chair: Marjaana Sianoja

- S18 Work Intensification in Service Work: Results From a Longitudinal Study  
Christian Korunka
- S19 Happy Work = Happy Life? The Role of Stressors and Resources for Work-Life Enrichment and Well-Being  
Eva Brosch, Carmen Binnewies
- S20 Exercise as an Activity Contributing to Recovery: Does Exercise Intensity Matter?  
Madelon van Hooff, Sabine Geurts
- S21 Benefits of a Lunchtime Park Walk or Relaxation Intervention From a Person-Oriented Approach  
Marjaana Sianoja, Ulla Kinnunen, Anne Mäkikangas
- S22 Effects of Park Walks and Relaxation Exercises During Lunch Breaks on Recovery from Work Stress: A Randomized Controlled Trial  
Pedro Torrente, Jessica de Bloom, Marjaana Sianoja, Ulla Kinnunen, Kalevi Korpela

## Oral session: Work-life balance and work-family conflict I

14:00 - 15:15 Panorama Hall

Chair: Laurenz Meier

- O17 The Association between Work-life Balance, Cortisol Patterns and Depressive Symptoms in the Whitehall II Study  
*Tahera Razavi, Jessica Abell, Yvonne Kelly, Meena Kumari*
- O18 When it Comes to Family and Career, Good is Stronger than Bad! - Effects of Work-Life Enrichment and Conflict on Career Disengagement  
*Dana Unger, Simone Kistler, Stefanie Daniel*
- O19 Understanding Work – Work Conflict  
*Heriberto Valdez Bonilla*
- O20 The Crossover of Work-Family/Family-Work Conflict, and Self-Efficacy in the Context of Demands and Stress in Work and Family Domain  
*Ewelina Smoktunowicz, Roman Cieslak*

## Oral session: Workers' physical health and functioning

14:00 - 15:15 Attika Hall

Chair: Norbert Semmer

- O21 Workstyle and the Development of Musculoskeletal Pain among White Water Raft Guides  
*Hilary McDermott, Fehmidah Munir, Iain Wilson*
- O22 Return to Work after Cancer: Development of Guidance for Safety and Health Based on Case Study Research  
*Alice Davis, Joanne Crawford, Anne Sleeuwenhoek, Hilary McDermott, Emma Donaldson-Feilder, Damien McElvenny, Fehmidah Munir*
- O23 The Relationship Between Psychological Age and Facets of Health Over Time: The Moderating Role of Chronological Age  
*Gretchen Petery, Janet Barnes-Farrell, Martin Cherniack*
- O24 Are Older Workers More Susceptible to Psychosocial and Physical Work Factors? Musculoskeletal Symptoms in Irish Health Care Therapists  
*Birgit Greiner, Sheilah Nolan, Dervla Hogan*
- O25 Prevalence of Low Back Pain in Employed and Self-Employed Physiotherapists, Physical and Athletic Therapists in Ireland Compared with the National Working Population  
*Dervla Hogan, Sheilah Nolan, Leonard O'Sullivan, Birgit Greiner*

## Oral session: Temporary employment and job insecurity

14:00 - 15:15 Conference Room  
Ground

Chair: Paul Glavin

- O26 From the Antecedents to the Consequences of the Temporary Agency Workers' Motivations: A Look through the Perspective of the Self-Determination Theory  
*Silvia Lopes, Maria José Chambel*

- O27 The Crossover of Job Insecurity in Dual-Earner Couples  
*Angelika Kornblum, Dana Unger, Christian Kessler*
- O28 The Impact of Job Insecurity on Health and Wellbeing in Europe  
*Kelly Calliope Sivris, Stavroula Leka, Shirley Thomas*
- O29 The Impact of Previous Employment Status in the Employment Relationship of Temporary Agency Workers  
*Maria José Chambel, Filipa Castanheira, Maria João Heitor, Joana Carreiras, Inês Almeida*
- O30 Developing a Mental Health Promotion Intervention in Unemployment and Temporary Work Contexts: Results from a Delphi Panel  
*Osvaldo Santos, Ana Virgolino, Elisa Lopes, Alexandra Dinis, Inês Almeida, Sara Ambrósio, Filipa Castanheira, Maria José Chambel, Maria João Heitor*

### Oral session: Leadership style and management I

**14:00 - 15:15 Conference Room 1 Chair: Ann Fridner**

- O31 Employer Safety Obligations, Transformational Leadership and their Interactive Effects on Employee Safety Performance  
*Jane Mullen, E. Kevin Kelloway*
- O32 Sustainable Management: Balancing Organizational Performance and Employee Well-being  
*Christine Ipsen, Kasper Edwards*
- O33 Job-Related Resources, Leader-Member Exchange and Emotional Exhaustion – A Longitudinal Study  
*Sylvie Vincent-Höper, Sabine Gregersen, Albert Nienhaus*
- O34 Discrete Emotions Matter: The Role of Self-Assurance for the Relationship between Authentic Leadership and Organizational Citizenship Behavior  
*Anna Sophia Pinck, Sabine Sonnentag, Christine Bosch*
- O35 Daily Transformational Leadership Qualifies the Impact of Daily Job Demands on Follower Work Engagement  
*Kimberley Breevaart, Arnold Bakker*

### Oral session: Organisational development and change I

**14:00 - 15:15 Conference Room 2 Chair: Mikaela Owen**

- O36 Digital Media Literacy Competence Acquisition (DMLCA) and Team Engagement in Teleworking (Virtual) Teams: A Theoretical Resource-enhancing Process Model based on the Input-Process-Output (IPO) Framework and the Conservation of Resources (COR) Theory  
*Irina Nikolova, Monique Ramioul*
- O37 The Influence of Learning Climate on Human Sustainability at Work  
*Christiane Ada de Lange, Tinka Van Vuuren, Hilbrand Oldenhuis, Beatrice Van der Heijden*

- O38 Opening the Pandora's Box of the HRM- Well-Being Relationship: A Review and Research Agenda  
*Sarah-Jane Cullinane, Yseult Freeney*
- O39 Development of the Career Management Questionnaire: Collaborative Design  
*Katerina Haskova, Martin Vaculik*
- O40 The Vicious circle of Error Aversion Approach: The Role of Negative and Moral Emotions in Enhancing Organisational Errors  
*Maria Luisa Farnese, Roberta Fida*

## Coffee

15:15 - 15:45 Olympia Hall Foyer

## Symposium: Job insecurity - Part 1: Antecedents and consequences of job insecurity

15:45 - 17:15 Olympia Hall Chair: Hans De Witte

- S23 Systematic Review on the Relationship of Job Insecurity and Health  
*Birgit Köper, Susanne Gerstenberg, Joachim Hüffmeier*
- S24 Review of 30 Years of Longitudinal Studies on the Association Between Job Insecurity and Health and Well-Being. Is there Causal Evidence?  
*Hans De Witte, Jaco Pienaar, Nele De Cuyper*
- S25 Job Insecurity Perceptions and Individual Well-being: Moderation by Macroeconomic Factors. A Multilevel Analysis in a Cross-Country Perspective  
*Beatrice Piccoli, Hans De Witte*
- S26 "That's All Part of the Job!": Qualitative Job Insecurity as Mediating Link Between Illegitimate Tasks at the Workplace and Pain Experiences  
*Mauricio E. Garrido Vasquez, Maria U. Kottwitz, Sophie Braun, Kathleen Otto*
- S27 The Role of Overall Justice Judgments in the Relationship between Job Insecurity and Attitudinal Outcomes: A Test of Mediation  
*Jurgita Lazauskaite-Zabielske, Ieva Urbanaviciute, Hans De Witte, Tinne Vander Elst*

## Symposium: Recent developments in workplace bullying - Part 1: New forms and insights in the bullying phenomenon

15:45 - 17:15 Panorama Hall Chair: Elfi Baillien

- S28 Interpersonal Conflict and Conflict Escalation Amongst Victims and Non-victims of Workplace Bullying  
*Elfi Baillien, Jordi Escartin, Dieter Zapf, Claudia Gross*
- S29 Do Emotions Instigate Negative Online Behaviour? Introducing and Testing the Emotion Reaction Model of Workplace Cyberbullying  
*Ivana Vranjes, Elfi Baillien, Heidi Vandebosch, Sara Erreygers, Hans De Witte*



- S30 Gender and Power Perspectives on Cyberbullying in Working Life  
*Rebecka Forssell, Sandra Jönsson, Tuija Muhonen*
- S31 Who do Targets of Cyberbullying Blame for Their Experiences and Does it Matter?  
*Samuel Farley, Christine Sprigg, Carolyn Axtell, Iain Coyne*
- S32 Workplace Bullying: A Gradual Process?  
*Guy Notelaers, Tinne vander Elst, Elfi Baillien, Hans De Witte*

### **Special Session: Management of psychosocial risks and work-related stress: National experiences based on the Management Standards approach and the way forward in Europe**

**15:45 - 17:15 Attika Hall**

**Chair: Sergio Iavicoli & Karina Nielsen**

- Sp1 Management of Psychosocial Risks and Work-Related Stress: National Experiences based on the Management Standards Approach and the Way Forward in Europe  
*Sergio Iavicoli, Peter Kelly, Patricia Murray, Malgorzata Milczarek*

### **Oral session: Individual differences and work outcomes I**

**15:45 - 17:15 Conference Room Ground**

**Chair: Céline Larivière**

- O41 Perfectionism and Depressive Symptoms in Teaching: Moderating and Mediating Effects of Detachment  
*Kia Gluschkoff, Marko Elovainio, Taina Hintsa*
- O42 Personality and Secondary Trauma in Child Protection Professionals  
*Noreen Tehrani*
- O43 Interpersonal Conflicts and Daily Negative and Positive Affect: Exploring the Moderating Role of Neuroticism  
*Jørn Hetland, Arnold B. Bakker, Roar Espevik, Olav K. Olsen*
- O44 Work Ability as a Risk Marker of Worker Health and Organisational Effectiveness: A Cross Sectional Study  
*Karen Coomer, Jonathan Houdmont*
- O45 Job Autonomy in the Relation to Work Engagement and Workaholism: The Mediation Role of Situational Motivation  
*Diana Malinowska, Anna Janik, Aleksandra Tokarz*

### **Oral session: Antecedents of stress and well-being I**

**15:45 - 17:15 Conference Room 1**

**Chair: George Georgantopoulos**

- O46 Assessing Work-related Practices and Perceptions in the Context of Improving Occupational Health among Quarry Staff  
*Roxane Gervais, Neil Davey*

- O47 Ethical Strain and Rumination in School Psychologists' Work: Individual Profiles and Associations with Weekly Well-being  
Mari Huhtala, Ulla Kinnunen, Taru Feldt
- O48 The Interactive Effects of Stressful Life Events and Attachment Insecurity on Employees' Work Outcomes and Health Symptoms  
Sigalit Ronen, Akanksha Bedi, Can Alpaslan, Sandy Green
- O49 Occupational Health in High-Performance Work Systems: Direct, Mediated, and Interactive Effects of High-Commitment and High-Involvement Management on Work Ability  
Severin Hornung, Jürgen Glaser, Thomas Höge, Matthias Weigl
- O50 Association of Observer-Assessed Working Conditions With Depressive Symptoms Among Female Eldercare Workers  
Louise Meinertz Jakobsen, Anette Fauerskov, Bruus Jorgensen, Birthe Thomsen, Birgit Greiner, Reiner Rugulies

### Oral session: Mental health and the workplace I

**15:45 - 17:15 Conference Room 2 Chair: Constanze Eib**

- O51 Why do General Practitioners Self-Diagnose and Self-Prescribe Drugs?  
Ann Fridner, Marie Gustafsson Sendén, Maja Wall, Karin Schenck-Gustafsson
- O52 Exploring Possible Predictors and Consequences of Embitterment in the Workplace  
Evie Michailidis, Mark Cropley
- O53 Alcohol as the Problem or Alcohol as the Solution? The Cyclical Nature of Workplace Injuries, Alcohol Use and Employee Mental Health  
Julie Weatherhead, Erica Carleton, Julian Barling, Kathryne Dupre
- O54 The Role of Personality Traits in the Association between Job Characteristics and Depression  
Vera JC Mc Carthy, Jennifer Cronly
- O55 The Perceived Similarities and Differences between Physical and Psychological Health and Safety  
Arlene Walker, James Storey

### Symposium: Job insecurity - Part 2: Mediation and moderation, with a focus on non-West European countries

**17:15 - 18:30 Olympia Hall Chair: Hans De Witte**

- S34 Differences between Qualitative and Quantitative Job Insecurity in Relationship with Nine Types of Performance  
Gabriel Fischmann, Coralia Sulea, Peter Kovacs, Dragos Iliescu, Hans De Witte
- S35 The Effect of Workplace and Personal Resources to Counteract Job Insecurity amongst Causal and Contract Staff Working in an Australian Regional University  
Prudence Millear, Mark Nugent

- S36 Qualitative Job Insecurity and Employee Well-Being: Mediation by Basic Need Satisfaction  
*Ieva Urbanaviciute, Jurgita Lazauskaite-Zabielske, Tinne Vander Elst, Hans De Witte*
- S37 How Resources Buffer the Association Between Job Insecurity and Performance: Need Satisfaction as Explanation  
*Delia Virga, Anja Van den Broeck, Hans De Witte*

### **Symposium: Recent developments in workplace bullying - Part 2: Advanced studies on antecedents and moderators**

**17:15 - 18:30 Panorama Hall Chair: Whitney Van den Brande**

- S38 The Relationship between Work Stressors and Being a Target of Workplace Bullying: Problem- and Emotion-focused Coping Strategies as Moderators?  
*Whitney Van den Brande, Elfi Baillien, Hans De Witte, Tinne Vander Elst, Anja Van den Broeck, Lode Godderis*
- S39 Workplace Bullying During Times of Change: Role Conflict, Job Insecurity and Control as Intervening Factors  
*Tinne Vander Elst, Elfi Baillien, Whitney Van den Brande, Hans De Witte, Lode Godderis*
- S40 The Chicken or the Egg: Cross-lagged Relationships between Person-Environment Misfit and Workplace Bullying  
*Katrien Vandeveldde, Elfi Baillien, Guy Notelaers*
- S41 Lifestyle Characteristics of a Target, Conflict Solving Styles and Exposure to Workplace Bullying  
*Milda Perminiene, Aidas Perminas*
- S42 The Relationship Between Conflicts and WB in Portuguese's Higher Education  
*Ana Verdasca*

### **DOP Symposium: Women, work and wellbeing: support during challenging times**

**17:15 - 18:30 Conference Room Ground Chair: Gail Kinman**

- S43 Women's Experiences of combining Work and IVF: Sense of Entitlement to Support  
*Nicola Payne, Suzan Lewis, Olga van den Akker*
- S44 Assessing Menopausal Women's Well-Being, Performance and Job Satisfaction at Work  
*Roxane Gervais, Prudence Milliar*
- S45 Caring for Oneself as well as Others: Compassion, Wellbeing and Distress in Female Social Workers  
*Gail Kinman, Louise Grant, Sarah Baker*

S46 Recovery and Work-Life Balance for Women  
Almuth McDowall

### Oral session: Job crafting

17:15 - 18:30 Attika Hall

Chair: Maria Törnroos

- O56 Empowering Employees to Job Craft: How and When Empowering Leadership Relates to Job Performance?  
Haijiang Wang, Evangelia Demerouti, Pascale Le Blanc
- O57 Contextual Factors of Job Boredom: Examining the Mediated Cross-level Relationships between Servant Leadership Climate and Job Boredom via Job Crafting  
Lotta Harju, Jari Hakanen, Wilmar Schaufeli
- O58 Occupational Self-Efficacy as a Mediator of the Relationship between Positive Emotions and Job Crafting: A Three-Wave Study among ICT Users  
Anna Rogala, Roman Cieslak
- O59 Proactive Personality and Well-Being: The Mediating Role of Job Crafting and Career Competencies  
Judith Plomp, Maria Tims, Jos Akkermans, Svetlana Khapova, Paul Jansen, Arnold Bakker
- O60 Exploring the Relationship between Job Crafting and Work Engagement from a Cross-Cultural Perspective: Comparing Italy and The Netherlands  
Alessandra Lazazzara, Maria Tims, Arnold B. Bakker

### Oral session: Mental health and the workplace II

17:15 - 18:30 Conference Room 1

Chair: Vlad Dediu

- O61 Risk Aggression and Work-related Stress  
Elvira Micali, Concettina Fenga
- O62 Predicting the Effectiveness of Work-focused Treatment of Common Mental Disorders: The Influence of Baseline Self-efficacy, Depression and Anxiety  
Veerle Brenninkmeijer, Suzanne Lagerveld, Roland Blonk, Wilmar Schaufeli
- O63 Take a Time Out and Recover!: A Study on Physical and Cognitive Recovery Experiences, Sleep and Well-being  
Yannick Balk, Jan de Jonge, Wido Oerlemans, Wijnand IJsselstein, Sabine Geurts
- O64 Stress in the Workplace: The Case Study of Cyprus  
Maria P. Michailidis, Stella Kaimakliotou, Evie Michailidis
- O65 The Interaction of Job Resources and Organizational Identification in Predicting Employee's Well-being  
Susana M. Tavares

## Oral session: Resilience and wellbeing at work I

17:15 - 18:30 Conference Room 2

Chair: Sheena Johnson

- O66 Examining Incivility and Burnout in Nursing: The Protective Role of Self-Efficacy  
*Heather Laschinger, Roberta Fida, Michael Leiter*
- O67 Like a Bamboo or a Stone? Influence of Resilience and Hardiness on Teacher Subjective Well-Being  
*Kathrin Heinitz, Timo Lorenz, Christina Bachmann*
- O68 Coping with Negative Acts at Work: Organizational Citizenship Behaviour as Impression Management  
*Andreas Liefvooghe, Bex Hewett, Gintare Visockaite, Siriyupa Roongreungsuke*
- O69 Experienced Burnout Level and its Relationship with Resilience among Health Care Staff  
*Zsuzsanna Kerekes, Danielle Valcheff, Hajnalka Sz. Makó, Tünde Édes, János Kállai, Michel Larivière*
- O70 Factors Influencing Problem Solving in a Nation-Wide Sample of 3.668 Greek Educators  
*Vasiliki Xythali, Maria Theologitou, Ntina Kourmoussi, Vasilios Koutras*

## EAOHP Evening Reception

18:45 - 20:30 Roof Garden, Royal Olympic Hotel

Tuesday, 12/04/2016

## Registration

**08:00 - 08:30** Olympia Hall Foyer

**Symposium: Stress at work 2015 - Part 1: Concepts, results, practical implications of (inter)national collaborations**

**08:30 - 09:30    Olympia Hall                      Chair: Nicola Jacobshagen**

**Chair: Nicola Jacobshagen**

- |     |   |
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| S47 | Why Appreciation at Work is Important: Results from Two Countries<br><i><u>Nicola Jacobshagen</u>, Lisa Björk, Benjamin Ulrich, Rebecca Lanz, Norbert K. Semmer</i>                       |
| S48 | Is Appreciation More than Mere Social Support? A Diary Study<br><i><u>Isabel B. Pfister</u>, Laurenz L. Meier, Nicola Jacobshagen, Désirée Stocker, Wolfgang Kälin, Norbert K. Semmer</i> |
| S49 | Conflict with Supervisor, Stress, and Resigned Attitude: Lower(ed) Job Resources as Mediator<br><i><u>Achim Elfering</u>, Christin Gerhardt, Simone Grebner, Urs Müller</i>               |

**Symposium: Dealing with psychological trauma in the workplace**

**08:30 - 09:30**    **Panorama Hall**                      **Chair: Noreen Anne Tehrani**

**Chair: Noreen Anne Tehrani**

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| S50 | The Case for Psychological Surveillance in the Workplace<br><i><u>Noreen Tehrani</u></i>   |
| S51 | The Development of an Organisationally Informed Trauma Therapy Programme<br><i><u>Noreen Tehrani</u></i>   |
| S52 | The Impact of Working Therapeutically with Psychological Trauma: a Narrative-based Poetic Examination of Personal Meaning<br><i><u>Tina Buxton</u></i> |

**Symposium: On- and off-job activities: The key to successful recovery**

**08:30 - 09:30    Attika Hall                      Chair: Kimberley Breevaart**

**Chair: Kimberley Breevaart**

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| S53 | <p>Too Tired to Recover: A Multi-Level Study on the Role of Motivation During Off-Job Activities</p> <p><i>Daantje Derks, <u>Kimberley Breevaart</u>, Arnold Bakker, Gera Noordzij</i></p>                                |
| S54 | <p>Only go to the Gym when it is Energizing? Energy Gained from Off-Job Activities Helps Employees with their Daily Workload</p> <p><i><u>Kimberley Breevaart</u>, Arnold Bakker, Daantje Derks, Tinka van Vuuren</i></p> |
| S55 | <p>Recovery and Social Media Use at Work: Gaining or Draining Personal Resources?</p> <p><i><u>Christine Syrek</u>, Tim Vahle-Hinz, Jana Kühnel, Jessica De Bloom</i></p>   |

- S56 Long-term Leisure Activity Profiles, Recovery Experiences and Work Performance  
*Johanna Rantanen, Jessica de Bloom, Sara Tement, Ulla Kinnunen*

### **Symposium: The person-oriented approach to job burnout**

**08:30 - 09:30 Conference Room Ground Chair: Anne Mäkikangas**

- S57 The Person-oriented Approach to Burnout: A Systematic Review  
*Anne Mäkikangas, Ulla Kinnunen*
- S58 Identifying Patterns of Work-Related Rumination and Their Links to Exhaustion, Reduced Professional Efficacy and Sleeping Problems Across Two Years  
*Ulla Kinnunen, Taru Feldt, Jessica de Bloom*
- S59 Identifying Patterns of Ethical Dilemmas and Their Associations With Job Burnout and Turnover Intention in a Public Sector Organization  
*Taru Feldt, Pia Pihlajasaari, Joona Muotka*
- S60 Individual Differences in Intervention Outcomes Among Participants of Mindfulness-, Acceptance-, and Value-Based Intervention for Burnout  
*Sanna Kinnunen, Anne Puolakanaho, Asko Tolvanen, Anne Mäkikangas, Raimo Lappalainen*

### **Oral session: Psychometrics in occupational health psychology I**

**08:30 - 09:30 Conference Room 1 Chair: Harry Becher & Sarven McLinton**

- O71 ASSET Pulse: Investigating the Utility of a Short Stress Measure  
*Sheena Johnson, Sara Guediri, Ivan Robertson*
- O72 An Adjectival Approach in Measuring Wellbeing at the Workplace  
*Dragos Iliescu, Coralia Sulea, Dan Ispas, Alexandra Ilie*
- O73 The Assessment of the Risks Related to Stress at Work Through Objective and Observational Risk Indicators: A Study on the INAIL's Checklist  
*Cristina Di Tecco, Claudio Barbaranelli, Matteo Ronchetti, Monica Ghelli, Benedetta Persechino, Sergio Iavicoli*
- O74 When Effects are Confounded, They Cannot be Interpreted: A Study of Confounding in Assessment Centre Ratings  
*Duncan Jackson, George Michaelides, Chris Dewberry*

### **Oral session: Work engagement and performance I**

**08:30 - 09:30 Conference Room 2 Chair: Wido Oerlemans**

- O75 Relational Job Characteristics and Context-free Wellbeing: The Mediating Role of Work Engagement and Burnout among Portuguese and Brazilian Hospital Nurses  
*Alda Santos, Filipa Castanheira, Maria José Chambel, Micael Vieira, Carlos Costa*

- O76 All You Need Is ...? A Diary Study on Differential Relationships between Job Resources and Basic Needs Satisfaction in the Prediction of State Work Engagement  
Laura Venz
- O77 Performance Perceptions About Leadership and Relationships at Work: Can They Serve as Buffers for Burnout on Academics?  
Ana Teresa Ferreira
- O78 Extending the Job Demands-Resources Model of Work Engagement: The Role of Demands and Resources from Other Domains  
I-Shuo Chen, Martin Fellenz

### **Symposium: Stress at work 2015 - Part 2: Concepts, results, practical implications of (inter)national collaborations**

**09:30 - 10:45    Olympia Hall                      Chair: Nicola Jacobshagen**

- S61 Do Deteriorations in Work Conditions Have Stronger Effects Than Equivalent Improvements? Results from Two Longitudinal Studies  
Laurenz Meier, Anita Keller, Christoph Nohe, Dororta Reis
- S62 Which Social Stressors do Affect Work-Related Well-Being More than Others? A Meta-Analytic Approach  
Christin Gerhardt, Nathal de Wijn, Bernd Kersten, Benjamin Ulrich, Simone Grebner, Norbert K. Semmer, Achim Elfering
- S63 Work Related Mobile Devices Use After Work Hours Recovery and Health  
Ivana Igic, Anita Keller, Norbert Semmer, Achim Elfering
- S64 Leading With(out) Emotions? - Effects of a Communication Leadership Training on Emotion Regulation Skills  
Belinda Seeg, Christina Habl, Astrid Schütz

### **Symposium: Leading to Well-being**

**09:30 - 10:45    Panorama Hall                      Chair: E. Kevin Kelloway**

- S65 Does Your Leader Make You Sick? A Longitudinal Study of the Effects of Transformational Leadership on Sickness Absenteeism  
Karina Nielsen, Kevin Daniels
- S66 Leadership, Recognition and Well-Being: A Moderated Meditational Model  
Stephanie Gilbert, E. Kevin Kelloway
- S67 The Signs of Struggle (SOS) Scale: The Development and Validation of a Workplace Tool for Leaders  
Jennifer K. Dimoff, E. Kevin Kelloway
- S68 Developing Leadership Through Strengths Use and Awareness: A Positive Psychology Perspective  
Philippe Dubreuil, Jacques Forest



- S69 Transformational Leadership and Group Affective Tone: The Roles of Leaders' Psychological Well-Being and Group Potency  
*Patrick Bruning, Nick Turner*

### Oral session: Workplace violence, bullying and harassment I

09:30 - 10:45 Attika Hall Chair: Sarven McLinton

- O79 Workplace Bullying as a Predictor of Disability Retirement: A Prospective Registry Study of Norwegian Employees  
*Morten Birkeland Nielsen, Jan Shahid Emberland, Stein Knardahl*
- O80 Workplace Bullying in the Health Sector in Portugal  
*Ana Verdasca*
- O81 The Nature, Extent and Impact of Educator Targeted Bullying on School Teachers in West Malaysia  
*Angeli Santos, Jia Jian Tin*
- O82 Bullying from a Manager's Perspective. A Study of Bullied Managers in Different Sectors and their Work Stress  
*Christina Björklund*

### Oral session: Burnout: Antecedents and consequences II

09:30 - 10:45 Conference Room Ground Chair: Veerle Brenninkmeijer

- O83 Staff Burnout amongst South African Public Hospitals: Proposing Positive Psychological Resources as a Mitigation Strategy  
*Ederick Stander, Leon De Beer, Marius Stander*
- O84 Am I Safe Here as a Patient? The Impact of Teamwork and Clinician Burnout on Patient Safety  
*Annalena Welp, Laurenz Meier, Tanja Manser*
- O85 Why Do They Stay, Why Do They Leave? – A Multi-Level Modelling Approach of Burnout and Turnover Intention among Child Care Teachers  
*Olivia Blöchliger*

### Oral session: Organisational development and change II

09:30 - 10:45 Conference Room 1 Chair: Victor Catano

- O86 The Influence of Procedural Justice and Change in Procedural Justice on Self-rated Health Trajectories: Results from the SLOSH-Study  
*Constanze Leineweber, Constanze Eib, Paraskevi Peristera, Claudia Bernhard-Oettel*
- O87 The Work Environment and Me - Development and Test of the Trondheim Co-workership Scale (TCS)  
*Marit Christensen, Siw Tone Innstrand*
- O88 Why Do Managers Leave Their Organisation? Investigating the Role of Ethical Organisational Culture in Manager Turnover in a 4-year Follow-Up Study  
*Maiju Kangas, Mari Huhtala, Anna-Maija Lämsä, Muel Kaptein, Taru Feldt*

- O89 Integrating Gender Equality within the Corporate Social Responsibility (CSR) Strategy in Latin America  
*Luis Torres, Aditya Jain, Stavroula Leka*

## Oral session: Antecedents of stress and well-being II

**09:30 - 10:45    Conference Room 2                      Chair: Sandy Herscovis**

- O90 Stress Sources and Manifestations in a Nation-wide Sample of 3.447 Greek Pre-primary, Primary and Secondary Educators  
*Ntina Kourmoussi, Evangelos C. Alexopoulos*
- O91 Awakening Assessments of Secretory Alpha Amylase Mediate the Relationship between Effort-reward Imbalance and Self-Reported Health  
*Joel Valente, Stephen Kent, Bradley Wright*
- O92 Unemployment and Work-Related Factors in Suicidal Behaviour: Findings from the Suicide Support and Information System in Ireland  
*Sara Leitao, Birgit A. Greiner, Celine Larkin, Jacklyn McCarthy, Carmel McAuliffe, Paul Corcoran, Eileen Williamson, Ella Arensman*
- O93 The Mediating Effect of Attributions on the Relationships between Workplace Incivility and Employees' Depression and Job Satisfaction  
*Saira Khan, Cong Liu, Xichao Zhang*
- O94 Does Work-Family Enrichment Enhance the Well-Being of Working Fathers?  
*Jeffrey Bagraim, Yeshadevi Gunesh, Ameeta Jaga*

## Coffee

**10:45 - 11:00    Olympia Hall Foyer**

## Symposium: Understanding job crafting - Part 1: Underlying mechanisms, boundary conditions and crossover effects

**11:00 - 12:15    Olympia Hall                                      Chair: Ana Sanz-Vergel**

- S70 How is Job Crafting Related to Service-Oriented Task Performance and Networking Behavior? The Role of Meaning in Work  
*Inge Hulshof, Evangelia Demerouti, Pascale Le Blanc*
- S71 When and How Job Crafting Increases Recovery: A Daily Study Among Colleagues  
*Ana Sanz-Vergel, Alfredo Rodríguez-Muñoz, Mirko Antino, Karina Nielsen*
- S72 Crossover of Reduction-Oriented Crafting Among Colleagues: A Diary Study on the Moderating Role of Working Conditions  
*Evangelia Demerouti, Maria Peeters*
- S73 Crossover of Expansive Job Crafting: About the Relationship with Performance and the Role of Leadership  
*Maria Peeters, Evangelia Demerouti, Cilia van der Ven*

- S74 When Daily Crafting Matters More for Employee Functioning? The Moderating Role of Organizational Changes  
*Despoina Xanthopoulou, Paris Petrou, Evangelia Demerouti, Eleni-Lida Kalogeropoulou, Sokratis Kostas*

### **Symposium: Future policy development on psychosocial risks and mental health at work in the European Union**

**11:00 - 12:15**     **Panorama Hall**     **Chair: Irene Houtman**

- S75 Restructuring Seriously Damages Health and Safety of Workers: The Case of the Restructuring Programme in Local Administration in Greece  
*T. Koukoulaki, D. Pinotsi, E. Geogiadou, A. Daikou, C. Zorba, A. Targoutzidis, K. Poullos, P. Panousi, Y. Skoulatakis, S. Drivas, D. Kapsali, K. Pahkin*
- S76 How Does the Labour Inspectorate Address Psychosocial Risks in European Countries? A Qualitative Case Study Approach  
*Michael Ertel, Hanna Janetzke*
- S77 A review of the European Union policy framework on psychosocial risks and mental health in the workplace  
*Stavroula Leka, Aditya Jain*
- S78 National experiences and good practices on psychosocial risks and mental health in the workplaces in the EU  
*Richard Wynne, Veronique De Broeck*
- S79 Priorities in EU policy scenarios - reflections on mental health  
*Irene Houtman*

### **Symposium: Interpersonal mistreatment at work: Measurement issues**

**11:00 - 12:15**     **Attika Hall**     **Chair: Coralia Sulea**

- S80 Timisoara Interpersonal Mistreatment at Work Inventory (TIMWI): The Development and Validation of a New Instrument  
*Coralia Sulea, Gabriel Fischmann, Dragos Iliescu*
- S81 Predictors of Received and Instigated Incivility: A Longitudinal Study  
*Michael Leiter, Arla Day*
- S82 The Relationship between Organizational Change and Being a Workplace Bully: A Three Wave Longitudinal Study  
*Elfi Baillien, Yannick Griep, Tinne Vander Elst, Hans De Witte*
- S83 Perpetrators and Targets Mistreatment. What's in the Name... A Matter of Content and Test Validity  
*Guy Notelaers, Elfi Baillien*

## Symposium: Risks and resources associated with burnout across occupations and countries

**11:00 - 12:15**    **Conference Room Ground**    **Chair: Gabriele Freude**

- S84            Mobbing and Burnout in a Representative Sample of the German Working Population  
*Grit Müller, Uwe Rose, Guy Potter, Peter Martus, Gabriele Freude*
- S85            Burnout, Psychosocial Resources, and Workload Demands in the Nursing Profession  
*Guy Potter, Daniel Hatch, Grit Mueller, Peter Martus, Gabriele Freude*
- S86            Interaction Effects of Psychosocial Occupational Factors on Burnout: 5 Year Follow-up Analyses of 5,924 Danish Employees  
*Hermann Burr, Thomas Clausen*
- S87            Work- and Individual-related Determinants of Vulnerability to Burnout, Depression and Work Ability  
*Peter Martus, Uwe Rose, Bettina Brendel, Grit Mueller, Guy Potter, Gabriele Freude*

## Oral session: Workplace health promotion

**11:00 - 12:15**    **Conference Room 1**            **Chair: Maggie van den Heuvel**

- O95            The Impact of Work Stress on Recognition of Need and Intention to Improve Physical Health in the Canadian Workforce: Results from a National Survey  
*Andrea Jones, Mieke Koehoorn*
- O96            Nothing is More Important than Health Promotion: The Relationship between Different CSR Activities and Commitment  
*Grit Tanner, Eva Bamberg, Marie Urhahn, Marlies Gude*
- O97            Talk or Run: Seeking Support and Exercising Help Mitigate the Negative Effects of Process Conflict on Entrepreneurial Health through Mental Preoccupation with Work  
*Constanze Eib, Guillaume Soenen, Olivier Torres*
- O98            The Quality of Working Life of Registered Nurses in Canada and the United States: A Literature Review  
*Behdin Nowrouzi, Emilia Giddens, Basem Gohar, Sandrine Schoenenberger*

## Oral session: Age and work

**11:00 - 12:15**    **Conference Room 2**            **Chair: Maria. P. Michailidis**

- O99            Employability: A Question of Ageing? A Systematic Review Examining Relations between Age Operationalizations and Employability  
*Annet de Lange, Aukje Nauta, Beatrice van der Heijden, Christiane de Lange, Tinka van Vuuren, Trude Furunes*
- O100           Paramedics - What Chance of Working Longer?  
*Deborah Roy, Andrew Weyman*

O101 Perceived Organizational Injustice and Work-Related Activities Off-Work Interacts to Predict Rumination among Older White-Collar Workers  
Leif Rydstedt, Mark Cropley

O102 Aging and Engaging: Work Engagement Along the Career Span  
Filipa Rodrigues, Miguel Pina e Cunha, Filipa Castanheira

### **EAOHP Distinguished Keynote Address: The challenge of burnout in contemporary society**

**12:15 - 13:00 Olympia Hall Chair: Sergio Iavicoli**

K2 The Challenge of Burnout in Contemporary Society  
Christina Maslach

### **Lunch**

**13:00 - 14:30 Olympia Hall Foyer**

### **Meet the Editors Session**

**13:15 - 14:30 Olympia Hall Chair: Despoina Xanthopoulou**

Sp2 Meet the Editors Session @ EAOHP 2016  
Despoina Xanthopoulou

### **Practitioner Focus Session: Policing and Wellbeing**

**13:15 - 14:30 Panorama Hall Chair: Amanda F. Allisey & Peter Kelly**

Sp3 An Integrated Workplace Mental Health Intervention in a Policing Context in Australia  
Amanda Allisey

Sp4 Psychosocial (Stress) Risk in Policing in two Police Forces the UK  
Peter Kelly

### **Symposium: Understanding job crafting - Part 2: Underlying mechanisms, boundary conditions and crossover effects**

**14:30 - 16:00 Olympia Hall Chair: Ana Sanz-Vergel**

S90 The Role of Job crafting in JD-R Theory: A Study Among Nurses  
Arnold Bakker

S91 Towards Unraveling The Underlying Mechanisms of Job Crafting: How Workaholic Versus Work Engaged Employees Craft Their Jobs  
Marijntje Zeijen, Maria Peeters, Jari Hakanen

S92 Who Are Job Crafters? A Longitudinal Study on How Different Work-Related States Predict Job Crafting and Each Other  
Jari Hakanen, Maria Peeters

S93 The Role of Organizational Transparency and Frequency of Organizational Change in Job Crafting  
Paris Petrou, Arnold Bakker

## Symposium: Mining mental health in Canada

**14:30 - 16:00**      **Panorama Hall**      **Chair: Michel AS Larivière**

- S94      Mining Mental Health in Canada  
*Michel Larivière, Céline Larivière, Zsuzsanna Kerekes, Behdin Nowrouzi, Caroline Dignard, Alain Boulay*
- S95      The Psychosocial Hazards of Mining  
*Zsuzsanna Kerekes, Michel Larivière, Behdin Nowrouzi, Céline Larivière, Caroline Dignard, AJ Boulay*
- S96      Mining Worker Physiological Wellbeing: A Focus on Reproductive Health  
*Céline Larivière*
- S97      Worker Perceptions of Injury and Illness-related Absenteeism in a Canadian Mining Company: Qualitative Findings from a Pilot Study  
*Caroline Dignard, Michel Larivière, Behdin Nowrouzi, Zsuzsanna Kerekes<sup>1,2</sup>, Céline Larivière, Alain Boulay*
- S98      Mining Mental Health in Canada: Methodological Considerations  
*Behdin Nowrouzi, Zsuzsanna Kerekes, Caroline Dignard, AJ Boulay, Céline Larivière, Michel Larivière*
- S99      Mapping Latent Variable Models of Mine Worker Health and Well-Being  
*Aj Boulay, Michel A. Larivière*

## Symposium: Resilience in the workplace: How personal resources contribute to resilience and psychological well-being

**14:30 - 16:00**      **Attika Hall**      **Chair: Roman Soucek**

- S100      Resilience as a Personal Resource and Facets of Resilient Behaviour in the Workplace  
*Roman Soucek, Nina Pauls, Michael Ziegler, Christian Schlett*
- S101      Resilience at Work: The Role of Regulatory Focus  
*Magdalena Bathen, Sandra Ohly  
University of Kassel, Kassel, Germany*
- S102      The Mediating Role of Psychological Detachment and Occupational Self-efficacy among Employees with High Autonomy and Highly Flexible Working Hours  
*Elisa Clauss, Annekatrin Hoppe  
Humboldt University Berlin, Berlin, Germany*

## Oral session: Organisational interventions and outcomes

**14:30 - 16:00**      **Conference Room Ground**      **Chair: Gregor Jenny**

- O103      The Use of MBSR in Stress Management Intervention in an Extractive Sector Company  
*Dorota Molek-Winiarska*

- O104 The Effects of Transformational Leadership and Intervention Specific Leadership on the Short and Long Term Use of a Web-Based Occupational Health Intervention  
*Mandus Frykman, Robert Lundmark, Ulrica von Thiele Schwarz, Karin Villaume, Henna Hasson*
- O105 Factors Affecting the Ability of Healthcare Commissioners and Practitioners to Implement Best Practice Guidelines in NHS Alcohol Services  
*Alec Knight, Peter Littlejohns, Tara-Lynn Poole, Gillian Leng, Colin Drummond*
- O106 Psychosocial Risk Management in the European Health and Social Care Sector: Factors Predictive of the Implementation of Procedures and Measures to address Psychosocial Risks  
*Sue Cowan, Stavroula Leka, Aditya Jain*
- O107 Workplace Characteristics Mediate the Relationship between Transformational Leadership and Motivation  
*Maria Karanika-Murray, George Michaelides*

### Oral session: Presenteeism and sickness absence

**14:30 - 16:00**      **Conference Room 1**      **Chair: Tinne Vander Elst**

- O108 Predictors and Consequences of Presenteeism: A Qualitative Study of Nurses in Geriatric Settings  
*Luke Fiorini, Amanda Griffiths, Jonathan Houdmont*
- O109 Emotion Work and Sickness Absence: A Prospective Study of Employees Working with Clients  
*Anne-Marthe Indregard, Stein Knardahl, Pål Ulleberg, Morten Nielsen*
- O110 Work Engagement and Occupational Sitting Time and Their Influence on Sickness Absence: Results from the Stormont Study  
*Fehmidah Munir, Iain Wilson, Jonathan Houdmont, Robert Kerr, Ken Addley, Stacy Clemen*
- O111 Exploring the Nuances of Presenteeism at Work across Contexts: A Cross-Country Comparison  
*Nathalie Saade, Aditya Jain, Marek Korczynski, Stavroula Leka, Ziming Cai*

### Oral session: Work and recovery

**14:30 - 16:00**      **Conference Room 2**      **Chair: Jana Kühnel**

- O112 Stress, Fatigue and Sleep Quality Leading up to and Following a Stressful Life Event  
*Michelle Van Laethem, Debby Beckers, Ap Dijksterhuis, Sabine Geurts*
- O113 What Makes for a Good Break? Effects of Recovery Experiences During Lunch Break on Afternoon Exhaustion and Work Engagement  
*Christine Bosch, Sabine Sonnentag, Anna Sophia Pinck*
- O114 Sleep and Satisfaction After Change from 8-hour Slow to 12-hour Fast Forward-Rotating Shift System in Industry  
*Kati Karhula, Mikko Härmä, Annina Ropponen, Tarja Hakola, Mikael Sallinen, Sampsa Puttonen*

- O115 Take a Good Break: Short-Term and Long-Term Effects of After-Work Activities on Detachment and Sleep Quality  
*Jan De Jonge, Josette Gevers, Irene Niks, Yannick Balk*
- O116 The Role of Poor Sleep in the Relation Between Workplace Bullying/ Unwanted Sexual Attention and Long-term Sickness Absence: A Longitudinal Study  
*Kirsten Nabe-Nielsen, Matias Brødsgaard Grynderup, Theis Lange, Johan Hviid Andersen, Jens Peter Bonde, Paul Maurice Conway, Anne Helene Garde, Annie Høgh, Linda Kaerlev, Reiner Rugulies, Åse Marie Hansen*

## Coffee

**16:00 - 16:15 Olympia Hall Foyer**

## Symposium: Assessing and addressing the psychosocial factors that impact the workplace

**16:15 - 17:30 Olympia Hall Chair: Arla L. Day**

- S103 Organizational Factors, Psychosocial Work Environment, Gender, and Health: A Systematic Review  
*Magnus Sverke, Petra Lindfors, Helena Falkenberg, Göran Kecklund, Linda Magnusson Hanson*
- S104 The Impact of an Unresolved Nurses' Strike  
*Arla Day, Michael Leiter*
- S105 Validation of the Guarding Minds @ Work Survey: A Tool for Assessing Psychosocial Factors in the Workplace  
*Aleka MacLellan, Dan Bilsker, Merv Gilbert, E. Kevin Kelloway*
- S106 The Road To Success: Evaluating Weekly Progress in the ABLE Program  
*Nikola Hartling, Arla Day, Lori Francis*  
*Saint Mary's University, Halifax, Nova Scotia, Canada*

## Symposium: Presenteeism: Moving the field forward

**16:15 - 17:30 Panorama Hall Chair: Gail Kinman**

- S107 Sickness Presenteeism as Psychological Absence: A Mediation Model of Presenteeism as a Determinant of Job Satisfaction via Affective-Motivational States  
*Maria Karanika-Murray, Halley Pontes, Mark Griffiths, Caroline Biron*
- S108 The Cost of Presenteeism due to Mental Health Disorders from the Employer's Perspective: How to Choose the Appropriate Evaluation Tool  
*Helene Sultan-Taïeb, Manon Lévesque, Michel Vézina, Chantal Brisson*
- S109 Predicting Presenteeism in Academic Employees: Risk and Protective Factors  
*Gail Kinman, Siobhan Wray*
- S110 Presenteeism in UK Prison Officers: A Qualitative Analysis  
*Gail Kinman, Andrew Clements, Jacqui Hart*



## Oral session: Occupational health psychology policy and practice

**16:15 - 17:30 Attika Hall**

**Chair: Roberta Fida**

- O117 Return to Work after Cancer: Implications for Occupational Health and Safety  
*Hilary McDermot, Fehmidah Munir, Joanne Crawford, Alice Davis, Anne Sleeuwenhoek, Emma Donaldson-Feilder, Damien McElvenny, Ken Dixon*
- O118 National Strategies for Psychosocial Factors at Work: Lessons Learned from the Australian Workplace Barometer  
*Tessa Bailey, Maureen Dollard*
- O119 How do Employees Notified with a Work-Related Mental Disorder in the Danish Workers Compensation System Experience the System?  
*Yun Ladegaard, Janne Skakon*
- O120 Applying the DPSEEA Framework to the psychosocial work environment  
*Maged Younes, Stavroula Leka*
- O121 Extending Working Life - Health Professionals Late Career Transitions, a Demographic Time Bomb for the UK's National Health Service?  
*Andrew Weyman, Alan Buckingham, Deborah Roy*

## Oral session: Resilience and wellbeing at work II

**16:15 - 17:30**

**Conference Room Ground**

**Chair: Katriina Hyvönen**

- O122 Early Identification and Prevention of Major Depression in Canadian Male Workers  
*JianLi Wang, Scott Patten, Bonnie Lashewicz, Andrew Bulloch, David Hodgins, Raymond Lam, Kendall Ho, Erin Michalak, Zul Merali, Doug Manuel, Alice Aiken, Sarika Gundu, Norbert Schmitz, Alain Marchand, Mark Attridge, Matthew Hanrahan, Adam Legge*
- O123 The Moderating Effect of Emotional Intelligence on the Relationship between Supervisor Conflict and Employees' Counterproductive Work Behaviours: A Longitudinal Study  
*Cong Liu, Jie Ma  
Hofstra University, Hempstead, USA*
- O124 Work-Related and Personal Factors and Skills Affecting Self-Esteem in a Nation-Wide Sample of 3,668 Greek Teachers  
*Maria Theologitou, Vasiliki Xythali, Ntina Kourmoussi, Vasilios Koutras*
- O125 Emotional Intelligence and Wellbeing: A Study of Young Adults working in a Voluntary Organization in Delhi  
*Dimpy Mahanta*

## Oral session: Work-life balance and work-family conflict II

**16:15 - 17:30      Conference Room 1      Chair: Susana M. Tavares**

- O126      Change within a UK Fire and Rescue Service: Assessing the Impact on Firefighter Wellbeing and Performance  
*Karen Maher, Ray Randall, Nicola Bateman*
- O127      Fathers in the Contemporary Family: Exploring the Emotive Content of Work-Life Balance  
*Maria Charalampous, Almuth McDowall, Harriet Tenenbaum, Kate O'Gorman, Nicole Nienhaus*
- O128      How Job Demands and Social Comparison Orientation Influence Work-Family Conflict and Work Engagement: A Moderated Mediation Model  
*Ines Martinez-Corts, Lourdes Munduate*
- O129      Managing Competing Responsibilities: Army Reservists and their Work-life Balance  
*Sabir Giga, Alison Collins, Sean Cowlshaw, Matthew Hall, Susan Cartwright*

## Oral session: Work engagement and performance II

**16:15 - 17:30      Conference Room 2      Chair: Milda Perminiene**

- O130      Take a Break - Be Engaged!  
*Jana Kühnel, Hannes Zacher, Jessica De Bloom, Ronald Bledow*
- O131      Does the Application of Character Strengths at Work Mediate the Relationship between Work Characteristics, Work Engagement, and Mental Health?  
*Cornelia Strecker, Thomas Höge, Melanie Hausler, Alexandra Huber, Mirjam Brenner, Stefan Höfer*
- O132      Work Engagement and Service Performance in the Irish Motor Industry. A study of Critical Outcomes in a Service Environment and the Role of Human Resource Practices  
*Jason Mallon, Janine Bosak*
- O133      Success of Interdisciplinary Collaborations  
*Simone Brandstädter, Karlheinz Sonntag*

## Conference Dinner

**19:00      Orizontes Restaurant**

Wednesday, 13/04/2016

## Registration

**08:00 - 08:30** Olympia Hall Foyer

**Symposium: Psychosocial safety climate: how organisational contexts can protect worker health and promote productivity - Part 1: Qualitative and quantitative evidence of PSC theory**

**08:30 - 09:30**    **Olympia Hall**    **Chair: Tessa Bailey & Maureen Dollard**

**Chair: Tessa Bailey & Maureen Dollard**

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| S111 | Psychosocial Risk Surveillance in Australia and the Effort-Reward Imbalance Model<br><i><u>Mikaela Owen</u>, Tessa Bailey, Maureen Dollard</i>  |
| S112 | Psychosocial Safety Climate in Frontline Healthcare: A Qualitative Study<br><i><u>Sarven McLinton</u>, Maureen Dollard, Amy Zadow, Michelle Tuckey</i>  |
| S113 | Climate Congruence: How Espoused and Enacted Psychosocial Safety Climate Affect Emotional Exhaustion and Work Engagement<br><i>Yulita, <u>Maureen Dollard</u>, Mohd Awang Idris</i>   |
| S114 | Psychosocial Safety Climate and Climate Strength: Main and Interaction Effects on Organisational Change and Psychological Distress<br><i>Ali Afsharian, Maureen Dollard, Christian Dormann, Tahereh Ziaian, <u>Mikaela Owen</u></i> |

**Symposium: Psychosocial risks and employee well-being: Total Worker Health policy implications**

**08:30 - 09:30    Panorama Hall                      Chair: Jeannie AS Nigam**

**Chair: Jeannie AS Nigam**

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| S115 | Quality of Worklife and Health in the U.S.<br><i><u>Naomi Swanson</u></i>                          |
| S116 | The Business Value of Paid Sick Leave<br><i>Abay Asfaw, Roger Rosa, <u>Rene Pana-Cryan</u></i>     |
| S117 | Total Worker Health Implications for Addressing Occupational Stress<br><i><u>Jeannie Nigam</u></i> |

**Symposium: Leadership – gaining shared understanding in interventions**

**08:30 - 09:30    Attika Hall                      Chair: Henna Hasson**

**Chair: Henna Hasson**

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| S118 | The Concept of Leader-Team Perceptual Distance and its Consequences for Employee Outcomes<br><i><u>Susanne Tafvelin</u>, Ulrica von Thiele Schwarz, Henna Hasson</i>                     |
| S119 | Does it Matter if We Agree? Leader – Team Perceptual Distance in Organizational Interventions<br><i><u>Henna Hasson</u>, Ulrica von Thiele Schwarz, Karina Nielsen, Susanne Tafvelin</i> |

- S120 Levels of Leadership - Engaging Senior Management and Line Managers in Organizational Interventions  
*Maria Karanika-Murray, Dimitra Gkiontsi*
- S121 Sense-Making and Management: Why First-Line Managers Get Different Results in Organizational Interventions  
*Christine Ipsen, Liv Gish, Signe Poulsen*

### **Symposium: The partnership model for research in workers' health: A novel method for ensuring a sustainable working life**

**08:30 - 09:30    Conference Room Ground    Chair: Malin Lohela Karlsson**

- S122 The Partnership Model for Research in Worker's Health  
*Malin Lohela Karlsson, Lydia Kwak, Iben Axén, Gunnar Bergström, Lotta Nybergh, Irene Jensen*
- S123 Development of Occupational Health Practice Guidelines: A Swedish Model  
*Lydia Kwak, Charlotte Wåhlin, Kjerstin Stigmar, Ulric Hermansson, Christina Björklund, Irene Jensen*
- S124 Integrating Economic Perspectives into the Partnership Model for Research in Worker Health - Presentation of a Tool for Engaging Employers in Workplace Interventions  
*Malin Lohela Karlsson*
- S125 Practice-Based Research Networks - Strengthening the Collaboration between Researchers and Target Audiences as Part of a Partnership Model  
*Iben Axén*

### **Oral session: Outcomes of working conditions**

**08:30 - 09:30    Conference Room 1    Chair: Sarah-Jane Cullinane**

- O134 Do Demands and Resources Faced by Doctors' Working Conditions Influence Quality of Care Provided? A Systematic Review  
*Kevin Teoh, Juliet Hassard, Tom Cox*
- O135 A Flexible Workforce: Exploring the Case of Increased Flexibility in Working Conditions and what this means for Employees  
*Dina Themistocleous, Andrew Weyman, David Wainwright*
- O136 Patient Safety and Occupational Health in Bosnia and Herzegovina Hospitals: First Insights and Opportunities for Improvement  
*Guido Offermanns, Šehad Draganovic*
- O137 Evaluating the Implementation and Outcomes of Interventions to Improve the Wellbeing of Healthcare Professionals: Findings and Implications of a Systematic Literature Review  
*Alec Knight, Nick Sevdalis, Prasuna Reddy, Tony Coggins, Suzanne Bench, Peter Littlejohns*

## Oral session: Creativity and innovative behaviour

**08:30 - 09:30    Conference Room 2                      Chair: Prudence Millear**

- O138                      Emotional Intelligence, Self-Efficacy, and Creativity among Employees of Advertising Agencies  
*Saadia Khalid, Aisha Zubair*
- O139                      Macro Structures versus Micro Crafting: A Moderated Mediation Model to Predict Work Engagement and Creativity  
*Piet van Gool, Evangelia Demerouti*
- O140                      Job Demands, Job Resources and Innovative Work Behavior: An EU Level Analysis  
*Vlad Dediu, Stavroula Leka, Aditya Jain*

## Symposium: Psychosocial safety climate: how organisational contexts can protect worker health and promote productivity - Part 2: Practical applications and macro-level implications of PSC

**09:30 - 10:45    Olympia Hall                                      Chair: Tessa Bailey & Maureen Dollard**

- S126                      Psychosocial Safety Climate Framework  
*Tessa Bailey, Maureen Dollard*
- S127                      Using Psychosocial Safety Climate to Predict Workplace Productivity Costs  
*Harry Becher, Maureen Dollard*
- S128                      Crooked Contexts and Ethical Leadership: Exposing Societal Corruption Effects on PSC, Job Control, and Job Satisfaction across 31 European Countries  
*Maureen Dollard*
- S129                      Psychosocial Safety Climate Theory Meta-Analysis  
*Amy Zadow, Mohd Awang Idris, Maureen Dollard*

## Practice Forum: Occupational health psychology practices in times of austerity

**09:30 - 10:45    Panorama Hall                                      Chair: Peter Kelly**

- Sp5                      The Contribution of Employee Assistance Programs in the Development of Occupational Health Practices in Greece  
*Anastasia Rush*
- Sp6                      Relations between Bundles of HR Practices and Sustainable Work Ability  
*Marc Gersen, Ety Wielenga, Annet de Lange, José Cuperus, Mathijs Timmermans*
- Sp7                      The Implementation of Organisational Health Practices in Piraeus Bank Group  
*Evi Chassapoyianni*
- Sp8                      The Evolvment of Corporate Psychiatry in Greece: The Hellas EAP Paradigm  
*George Georgantopoulos*

## Symposium: Participative prevention of psychosocial emergent risks in small and medium enterprises: Overview of a collaborative project

**09:30 - 10:45 Attika Hall**

**Chair: Sílvia Silva**

- S134 Exploring Psychosocial Risks in Greek SMEs - A Qualitative Study  
*Karolina Doulougeri, Katerina Georganta, Anthony Montgomery*
- S135 Psychosocial Risks Prevention – Perspectives from Portuguese SMEs  
*Sara Ramos, Patrícia Costa, Sílvia Silva, Ana Passos, Susana Tavares*
- S136 Exploring Emergent Psychosocial Risks in Spain: A Qualitative Approach  
*Francisco Bretones, Jose Gonzalez, Antonio Delgado, Rocio Gonzalez*
- S137 SME's Perspective on Psychosocial Risks – From Identifying to Intervening in Four Countries  
*Patrícia Costa, Sara Ramos, Sílvia Silva, Ana Passos, Susana Tavares, Francisco Bretones, Antonio Delgado, Karolina Doulougeri, Katerina Georganta, Barbara Giacominielli, Jose Gonzalez, Rocio Gonzalez, Anthony Montgomery, Margherita Pasini*
- S138 Developing a Psychosocial Risk Tool for SMEs  
*Katerina Georganta, Karolina Doulougeri, Anthony Montgomery*

## Symposium: Work-life balance

**09:30 - 10:45**

### Conference Room Ground

**Chair: Paraskevas Petrou**

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| S139 | Organizational Availability Demands and Work-Life Balance: the Role of Detachment and Length of Information and Communication Technology (ICT) Use<br><i><u>Clara Heissler, Antje Schmitt, Sandra Ohly</u></i>                         |
| S140 | Daily Job Challenges and Off-job Activities: Positive Versus Negative Spillover<br><i><u>Paraskevas Petrou, Wido Oerlemans, Evangelia Demerouti</u></i>  |
| S141 | New Ways of Working: Who do They Help, Who do They Hinder? The Moderating Role of Self-Efficacy and Perfectionism in the Relationship between NWW and Wellbeing Outcomes<br><i><u>Machteld van den Heuvel</u></i>                      |
| S142 | Leaving One's Work Behind: A Daily Diary Study on the Role of Family and Work Identity<br><i><u>Sara De Gieter, Sara Tement</u></i>  |
| S143 | How Work-Self Conflict/Facilitation Influences Exhaustion and Task Performance: A Three-Wave Study on the Role of Personal Resources<br><i><u>Evangelia Demerouti, Ana Sanz-Vergel, Paraskevas Petrou, Machteld van den Heuvel</u></i> |

## Symposium: Work engagement: More than just engaging with work

**09:30 - 10:45    Conference Room 1                      Chair: Prudence Millear & Roxane Gervais**

- S144                      Early Childhood Staff and their Work Engagement  
*Prudence Millear, Simone Chong*
- S145                      The Enhancement of Work Engagement through Job, Personal and Work Characteristics  
*Roxane Gervais, Prudence Millear*
- S146                      Work Engagement in Nursing Staff in Aged Care Facilities  
*Prudence Millear, Ashleigh Rowbottom*
- S147                      Work Engagement: Is it Something More or Too Much of a Good Thing?  
*Prudence Millear, Roxane Gervais*

## Oral session: Mental health and the workplace III

**09:30 - 10:45    Conference Room 2                      Chair: Sara Leitaó Alexandre**

- O141                      Impacts of Poor Economic Conditions in Working Environment on Mental Health and Workability  
*Marija Molan*
- O142                      Managerial Quality and Employees' Mental Health. Results from a Multi-level Study  
*Reiner Rugulies, Louise Meinertz Jakobsen, Birgit Aust*
- O143                      The Impact of Intimate Partner Violence (IPV) on Employee Mental Health and Work Outcomes  
*Arlene Walker, Kashmira Daruwalla*
- O144                      Correlation of Roles and Mental Health Functioning of Adult Children of Alcoholic Fathers in Pakistan  
*Ivan Suneel*
- O145                      Moderating Role of Organizational Culture in Relationship of Personality Traits and Positive Mental Health: An Empirical Study of Professionals Working in Pakistan  
*Nadia Batool, Rubina Hanif*

## Coffee

**10:45 - 11:00    Olympia Hall Foyer**

## Symposium: The work-family interface as a complex construct: Basic processes and influencing factors

**11:00 - 12:15**     **Olympia Hall**     **Chair: Petra L. Klumb**

- S148     Gender Differences in the Work-Family Spillover and Crossover within Dual-Earner Couples  
*Lynn Germeys, Sara De Gieter*
- S149     How Do Different Kinds of Social Demands at Work Affect Our Well-being? Results From a Diary Study  
*Regina Jensen, Sebastian Siegler, Petra L. Klumb*
- S150     When Does Flexibility Aggravate or Counteract Work-Family Conflict? Looking at Spillover and Crossover Effects via Psychological Detachment  
*Bettina Kubicek, Matea Paškvan, Sara Tement, Katarina Katja Mihelic*
- S151     Micro-longitudinal Associations between High-Arousal Negative Affect and Detachment from Work of Employed Parents: A Comparison of Two Modelling Approaches  
*Sebastian Siegler, Manuel Voelkle, Laurenz Meier, Petra Klumb*

## Research Forum: Doctoral, Masters students and young researcher showcase

**11:00 - 12:15**     **Panorama Hall**     **Chair: Birgit Greiner**

- Sp9     Just After Completion: Personal and Workplace System Factors of Obstetrical Nurses in Northeastern Ontario, Canada: Using the Work Disability Prevention Framework  
*Behdin Nowrouzi, Nancy Lightfoot, Lorraine Carter, Michel Lariviere, Ellen Rukholm, Diane Diane Belanger-Gardner*
- Sp10     Just After Completion: Does Chronic Work Stress Matter? Trajectories of Working-Conditions and Employees Health and Well-Being 10-Years Later  
*Ivana Igic, Anita Keller, Achim Elfering, Wolfgang Kealin, Franziska Tschan, Norbert K Semmer*
- Sp11     The Grand Doctoral Plan: Does a Physical Activity Intervention Improve Wellbeing among University Employees?  
*Clare Smith, Mariana Kaiseler, Jim McKenna, John Hamilton, Becky Wride*
- Sp12     The Grand Doctoral Plan: Using Knowledge Management to Promote Psychosocial Risk Management: An Enterprise Level Perspective  
*Tolulope Fadipe*
- Sp13     The Grand Doctoral Plan: Cross-sectional and Prospective Contribution of Socioeconomic Status and Demographic and Personal Factors, to the Eating Behaviours of Employees of Civil Servants  
*Judith Grant*



## Symposium: Revisiting the psychological experience and consequences of unemployment

11:00 - 12:15 Attika Hall

Chair: Hans De Witte

- S157 Let's Volunteer in Times of Unemployment: A Two-year Follow-up Study Investigating Health, Health Behaviour and Well-being Outcomes  
*Yannick Griep, Martin Hyde, Tim Vantilborgh, Jemima Bidee, Hans De Witte, Roland Pepermans*
- S158 Why do Individuals Suffer During Unemployment? The Causal Role of Deprived Psychological Needs  
*Andrea Zechmann, Karsten Paul*  
*Friedrich-Alexander University of Erlangen-Nürnberg, Nürnberg, Germany*
- S159 How Evidence Based is the Guidance of Unemployed to Work? A Brief Review of the Literature  
*Roland Blonk*  
*TNO, Leiden, The Netherlands*
- S160 Cross Validation of a Psychosocial Typology in the South African Context  
*Leoni van der Vaart, Anja van den Broeck, Hans de Witte, Ian Rothmann*
- S161 Cultural Conventions and Unemployment in South Africa  
*Melinda Du Toit, Hans De Witte, Sebastiaan Rothmann, Anja Van den Broeck*

## Oral session: Leadership style and management II

11:00 - 12:15 Conference Room Ground Chair: Susanne Tafvelin

- O146 Impacts of Work-Related Stress on Productivity: Effective Management Techniques  
*Kavitha Palaniappan*
- O147 Leading Ethical Matters to Followers: The Relationship between Ethical Leadership and Followers' Wellbeing Moderated by Autonomy at Work and General Self-efficacy  
*Sarah Desirée Schäfer, Guido Offermanns*
- O148 Passive Leadership and Employee Job Satisfaction and Engagement: The Role of Basic Need Satisfaction  
*Hilde Hetland, Jørn Hetland, Cecilie Schou Andreassen, Ståle Pallesen, Evangelia Demerouti, Arnold Bakker*
- O149 Leader-Member Exchange and Differentiation: Stress Remedy for Customer-Instigated Aggression?  
*Jonathan Booth, Cecile Emery, George Michaelides*

## Oral session: Individual differences and work outcomes II

11:00 - 12:15    Conference Room 1    Chair: Rebecca Brauchli

- O150      Personality and Work Stress: The Role of Five-Factor Model Traits and Cynicism in Perceptions of Work Characteristics  
*Maria Törnroos, Mirka Hintsanen, Taina Hintsa, Liisa Keltikangas-Järvinen*
- O151      Individual Differences in Affect Regulation Make the Difference: Action-State Orientation as a Moderator of the Relationship between Situational Constraints and Perceived Competence at Work  
*Antje Schmitt, Oliver Weigelt*
- O152      Any Regrets? Occupational Regrets and Well-Being in a Four-Year Follow-Up Study  
*Katriina Hyvönen, Taru Feldt*
- O153      The Association between Workplace Bullying and Depressive Symptoms: The Role of the Perpetrator  
*Eszter Török, Matias Brødsgaard Grynderup, Åse Marie Hansen, Anne Helene Garde, Annie Høgh, Kirsten Nabe-Nielsen*

## Oral session: Inequalities in working conditions and health

11:00 - 12:15    Conference Room 2    Chair: Dana Unger

- O154      Trends and Obstacles to Employment of Persons From Vulnerable Groups in the Netherlands  
*Katarina Putnik, Astrid Hazelzet, Roland Blonk, Hardy van de Ven*
- O155      Examining Urban, Rural, and Remote Northeastern Ontario Registered Nurses QOWL Factors and Stress  
*Judith Horrigan, Nancy Lightfoot, Michel Larivière, Kristen Jacklin*
- O156      Under-Rewarded Boss: Gender, Workplace Power, and the Distress of Perceived Pay Inequity  
*Scott Schieman, Atsushi Narisada*
- O157      Palatable Unjust Desserts: How Procedural Justice Weakens the Pain of Perceived Pay Inequity  
*Atsushi Narisada*
- O158      Workers' Perceptions of Occupational Safety and Health services Availability and Quality: Considerable Variation by Demographic, Occupational and Companies Characteristics  
*Sergio Iavicoli, Matteo Ronchetti, Cristina Di Tecco, Fabio Boccuni, Benedetta Persechino, Nico Dragano*

## **Work & Stress – Routledge Keynote Address: Getting to grips with organizational interventions: What works for whom under which circumstances?**

**12:15 - 13:00 Olympia Hall**

**Chair: Olga Epitropaki**

- K3                      Getting to Grips with Organizational Interventions: What Works for Whom under which Circumstances?  
*Karina Nielsen*

## **Lunch and Poster Session**

**13:00 - 14:30 Kallirroo Hall**

### **Poster session: Diversity at work**

**13:00 - 14:30 Kallirroo Hall**

- P45                      Older Physiotherapists and Uncertain Futures  
*Deborah Roy, Andrew Weyman, Alan Buckingham*
- P46                      Gender Differences in Conscientiousness Among Leaders in Kuwait  
*Bader Al-Ansari*
- P47                      Working Women: Obstacles and Challenges in Career Planning  
*Maria P. Michailidis, Evie Michailidis*
- P48                      Findings from the NIOSH Quality of Worklife Survey: Differences Across Race and Ethnicity  
*Rashaun Roberts, Jeannie Nigam*
- P49                      Examining Unwanted Sexual Attention as a Risk Factor for Long-Term Sickness Absence: A Prospective Study Stratified by Gender and Source of Exposure  
*Annie Hogh, Paul Maurice Conway, Thomas Clausen, Ida Elisabeth Huitfeldt Madsen, Hermann Burr*

### **Poster session: Burnout**

**13:00 - 14:30 Kallirroo Hall**

- P50                      Service with a Fake Smile and Emotional Exhaustion. Does Emotional Intelligence Matter?  
*Dorota Szczygiel*
- P51                      'Working in the Evening Impedes Employee Recovery'... Well, it Depends  
*Julie Menard, Annie Foucreault, Sarah-Genevieve Trepanier*
- P52                      Cultural Differences in Burnout Studies: Review of French and Canadian Researches about Nurses' Work Condition  
*Sandrine Schoenenberger, Behdin Nowrouzi, Basem Gohar*
- P53                      Variables of Predictive of Burnout in Nurses of a Public Hospital in Guadalajara, Mexico.  
*Maria de Lourdes Preciado Serrano, Blanca Elizabeth Pozos Radillo, Ana Rosa Plascencia Campos, Juan Manuel Vazquez Goñi*

- P54 Positive and Negative Work Rumination and its Associations with Sleep Quality, Burnout and Relaxing-Substance Abuse  
*Martial Bersef, Sophie Baeriswyl, Andreas Krause*
- P55 Study of Burnout among Physicians of University Hospital Centre of Sidi Bel-Abbès City (Algeria)  
*Chahrazed Kandouci, Linda Regad, Fatiha Baraka, Baderdine Abdelkrim Kandouci*
- P56 Occupational Burnout among Nurses in Hungary: An Exploratory Analysis of Demographic and Occupational Factors  
*Behdin Nowrouzi, Zsuzsanna Kerekes, Hajnalka Sz.Mako, Tunde Edes, Janos Kallai*
- P57 Could Specific Work Tasks Add Fuel to the Fire? On the Hierarchical and Multidimensional Nature of Teacher Motivation in Relation to Job Burnout  
*Claude Fernet, Julien Chanal, Frédéric Guay, Stéphanie Austin*
- P58 Organizational Factors and Burnout among Nurses: A Systematic Review  
*Basem Gohar, Fizza Ali, Behdin Nowrouzi, Sandrine Schoenenberger, Michel Larivière*
- P59 Burnout and General Health Condition among Hungarian Health Care Professionals  
*Zsuzsanna Kerekes, Behdin Nowrouzi, Hajnalka Sz.Makó, Tünde Édes, János Kállai, Michel Larivière*
- P60 Workplace Stress, Burnout and Violence: Teachers as Victims  
*Jeanmarie Keim, Patricia Nevala*

## Poster session: Mental health and the workplace

**13:00 - 14:30 Kallirroe Hall**

- P61 A Theoretical Perspective on the Mediating Role of Mental Clarity in the Relationship between Health and Cognitive Processing  
*Duncan Jackson, Juliet Hassard*
- P62 Thoughts Concerning Research on the Consequences of Job Stress for Teachers  
*Irvin Sam Schonfeld, Renzo Bianchi, Peter Luehring-Jones*
- P63 My Well-Being in My Own Hands: Experiences of Beneficial Recovery During Burnout Rehabilitation  
*Stela Salminen, Anne Mäkikangas, Marja Hätinen, Ulla Kinnunen, Mika Pekkonen*
- P64 The Influence of Workplace Stress, Pension, and Work Arrangements on Age One Plans to Retire  
*Tabatha Thibault, E. Kevin Kelloway, Dannie Brown, Amy Warren*
- P65 Work-Related Well-Being and Cognitive Function: Investigating Causal, Reversed-Causal and Reciprocal Relationships  
*Rodanthi Lemonaki, Despoina Xanthopoulou, Panagiotis Simos, Evangelos Karademas*

- P66 Emotional Demands at Work and the Risk of Clinical Depression - A Longitudinal Study in the Danish Public Sector  
*Marianne Agergaard Vammen, Sigurd Mikkelsen, Åse Marie Hansen, Jens Peter Bonde, Matias Brødsgaard Grynderup, Anette Kærgaard, Linda Kærlev, Ole Mors, Reiner Rugulies, Jane Frølund Thomsen*
- P67 Occupational Mental Health Protocol for the Primary Healthcare Level  
*Pablo Garrido*
- P68 Psychosocial Hazards at Work: Can We Ignore Personality in Times of Change?  
*Katarzyna Orlak*
- P69 Occupational Groups and Suicide in Ireland - A Psychological Autopsy Study  
*Birgit Greiner, Sara Leitao, Celine Larkin, Jacklyn McCarthy, Carmel McAuliffe, Paul Corcoran, Eileen Williamson, Ella Arensman*
- P70 Relationship between Psychological (Eudaimonic) and Subjective (Hedonic) Well-Being with Neurobiological Correlates: Implications for Employee Well-Being?  
*Andrius Šmitas, Loreta Gustainiene*

### **Poster session: Work engagement and positive organisational behaviour**

**13:00 - 14:30 Kallirroe Hall**

- P71 Positive Organizational Behaviour and Sick-leave in Spain  
*Maria Villaplana Garcia*
- P72 Enhancing Teamwork and Quality of Care through Personal Professional Development Activities: The Mediating Role of Reflective Thinking  
*Annalena Welp, Anya Johnson, Helena Nguyen, Suzanne Murray, Nickolas Yu, Lin Perry*
- P73 Can Quality Management Practices Result in Better Performance Through Enhanced Employee Commitment and Engagement? A Theoretical Model Explained in the Light of COR  
*Anna Zukowicka-Surma*
- P74 Does Empowering Leadership Facilitate Work Engagement in Higher Education?  
*Eyvind Helland, Marit Christensen, Siw Tone Innstrand*

### **Poster session: Workplace health promotion**

**13:00 - 14:30 Kallirroe Hall**

- P75 Effect of Cognitive-Emotional Training on Job Satisfaction and Occupational Wear of Nurses  
*Ana Rosa Plascencia Campos, Blanca Elizabeth Pozos Radillo, María Lourdes Preciado Serrano, José Gabriel Barragan Ojeda*

- P76 The Positive Impacts of Civil Aviators' Self-Disclosure Experiences on their Job Engagement and Job Performance  
Chian-Fang G. Cherng, Jian Shiu
- P77 Deciding to be Present or Absent when Sick. Interactions between Contextual and Personal Factors  
Ingrid Steen Rostad, Sylvi Thun, Per Øystein Saksvik
- P78 Young Workers in Times of Economic Crises: Health-Related Working Conditions and Occupational Safety and Health Protection in Italy  
Nico Dragano, Cristina Di Tecco, Matteo Ronchetti, Giuliana Buresti, Sergio Iavicoli

## **Poster session: Working conditions and resilience**

**13:00 - 14:30 Kallirroe Hall**

- P79 Development of a New Tool for Paramedics and their Supervisors after a Critical Incident  
Janice Halpern, Robert G. Maunder, Brian Schwartz, Maria Gurevich
- P80 Well-Being and Labor: Do Resilience and Meaning of Work Buffer the Job Demands of Midwives?  
Timo Lorenz, Sarah Krückels, Daniel Schulze, Kathrin Heinitz
- P81 Psychological Assistance Programs for Law Enforcement Personnel: Critical Incident Stress Management in Romania  
Darius Turc
- P82 Training for External Employability to Reduce Temporary Agency Workers' Perceptions of Job Insecurity and its Related Negative Outcomes: An Exploratory Study  
Marianna Giunchi, Maria José Chambel, Chiara Ghislieri
- P83 Occupational Stress and Emotional Well-Being in Military Organizations: Behavioral fitness, resilience and on job training as protective factors  
Konstantinos Papachristopoulos
- P84 Assessing Effort-Reward Imbalance amongst Dairy Farmers: Work Stress is Associated with the Cortisol Awakening Response and Secretory Immunoglobulin A Secretion  
Pennie Eddy, Eleanor Wertheim, Bradley Wright

## **Business Meeting (open to public)**

**13:15 - 14:15 Attika Hall**

## **Symposium: The “always on culture”– implications for recovery and work-life balance**

**14:30 - 15:30 Olympia Hall**

**Chair: Cristina Quinones**

- S162 Is there a Price for Easy-Access Recovery after Work? Daily Impact of Emotional Demands and Resources on Recovering through Excessive Technology Use  
Cristina Quinones

- S163 Invisible and Implicit: The Impact of Employer-Provided Mobile Technology on Professionals' Boundary Management Strategies  
*Almuth McDowall, Buki Ogunde*
- S164 Enabled Intensification? ICT Use, Work-Life Balance and Wellbeing in UK Academics  
*Gail Kinman*
- S165 I Just Can't Get Work Out of my Head': A Critical Retrospective of Research on Mobile Telephony and Work-life Balance  
*Diannah Lowry*

### **Symposium: Relating context, process and outcome evaluation of organizational health interventions**

**14:30 - 15:30    Panorama Hall                      Chair: Georg F. Bauer**

- S166 Conceptual Relationships between Context, Process and Outcome Evaluation of Organizational Health Interventions  
*Georg Bauer, Gregor Jenny*
- S167 Effects of Lean Management on Psychosocial Working Conditions and Employee Well-being in a Healthcare Setting  
*Rebecca Brauchli, Gregor Jenny, Désirée Füllemann, Georg Bauer*
- S168 Does Intervention Participants' Process Appraisal Predict Change in Outcomes of Entire Teams?  
*Désirée Füllemann, Annemarie Fridrich, Gregor Jenny, Rebecca Brauchli, Georg Bauer*
- S169 Same but Different: The Influence of Team Context on Intervention Effects  
*Gregor Jenny, Alice Inauen, Rebecca Brauchli, Horst Rettke, Georg Bauer*

### **Oral session: Intervention evaluation**

**14:30 - 15:30    Attika Hall                      Chair: Ulla Kinnunen**

- O159 Drivers of Change in Introducing Occupational Health Management  
*Markus Wiencke, Sabine Sommer*
- O160 A Process Evaluation of the Implementation of the Danish National Return-to-Work Program  
*Birgit Aust, Maj Britt D. Nielsen, Jørgen V. Hansen, Reiner Rugulies, Ute Bültmann, Otto M. Poulsen*
- O161 Return to Work among Employees Sick-Listed for Common Mental Disorders: Design of a Cluster Randomized Controlled Trial of an Intervention Conducted at the Occupational Health Service  
*Gunnar Bergström, Lotta Nybergh, Malin Lohela Karlsson, Lennart Bodin, Lydia Kwak, Margareta Torgén, Irene Jensen*

## Oral session: Workplace violence, bullying and harassment II

**14:30 - 15:30**    **Conference Room Ground**    **Chair: Sabir Giga**

- O162            Psychosocial Work Environment in Ghana's Oil and Gas Industry: A Cause for Concern?  
*Stephen Kumako, Stavroula Leka, Aditya Jain*
- O163            The Effect of Interpersonal Mistreatment at Work on Employee Health: A Three Wave Longitudinal Study  
*Alexandra Tuser, Coralia Sulea, Dragos Iliescu, Alexandra Ilie, Dan Ispas*
- O164            The Study of Workplace Incivility Based on Emotion: The Moderating Effects of Personality and Organizational Factors  
*Yu Yan, Yi-Yuan Wu*

## Oral session: Emotions at work

**14:30 - 15:30**    **Conference Room 1**                    **Chair: Cristina Di Tecco**

- O165            Political Skill as a Buffering Moderator of the Adverse Effects of Emotional Dissonance on Employees' Well-being  
*Wladislaw Rivkin, Klaus-Helmut Schmidt*
- O166            Job-Related and Personal Factors Influencing Emotional Intelligence in a Representative Sample of 3668 Greek Teachers  
*Maria Theologitou, Vasiliki Xythali, Ntina Kourmoussi, Vasilios Koutras*
- O167            An Occupational Portrait of Emotional Labor Demands and their Psychosocial Consequences for Workers  
*Diana Singh, Paul Glavin*

## Oral session: Burnout: Antecedents and consequences III

**14:30 - 15:30**    **Conference Room 2**                    **Chair: Amy Zadow**

- O168            Burnout and Depression Overlap in New Zealand Teachers  
*Renzo Bianchi, Irvin Sam Schonfeld*
- O169            The Changing Face of Incarcerated Women: Mental Health Workers' Stress and Burnout  
*Jeanmarie Keim, Patricia Nevala*
- O170            Profiles of a Short-time Burnout Change and Job-related Affective Well-being  
*Beata Basinska, Ewa Gruszczynska*

## Coffee

**15:30- 15:45**    **Olympia Hall Foyer**



## Symposium: “First, Do No Harm”: Examining antecedents and consequences of different sources of aggression in the workplace

15:45 - 16:45 Olympia Hall

Chair: Roberta Fida

- S170 Exploring Pathways between Patient Aggression and Nurse Counterproductive Work Behaviour  
*Roberta Fida, Carlo Tramontano, Marinella Paciello, Tahira Probst*
- S171 Impact of Workplace Mistreatment on Patient Safety Risk and Nurse-Assessed Patient Outcomes  
*Heather K. Laschinger, Roberta Fida*
- S172 Workplace Bullying Predicted by Trait Anger, and Constructive and Destructive Forms of Leadership. A 3-Wave Longitudinal Study  
*Stig Berge Matthiesen, Andrea Bobbio*
- S173 Angry Nurses: Managing the Emotions in the Interaction with Aggressive Patients  
*Chiara Guglielmetti, Silvia Gilardi*

## Symposium: Occupational health psychology and sustainability - furthering the research agenda

15:45 - 16:45 Panorama Hall

Chair: Aditya Jain

- S174 Corporate Sustainability and Workplace Equality: Fighting Discrimination, Enhancing Human Capabilities  
*Luis Torres, Aditya Jain, Stavroula Leka*
- S175 Influence of Corporate Social Responsibility initiatives on the health, safety and well-being of workers  
*Daniel Ripa, Juan Herrero*
- S176 Occupational Safety, Health and Wellbeing as an essential driver of ‘material’ sustainability  
*Aditya Jain*

## Oral session: Psychometrics in occupational health psychology II

15:45 - 16:45 Attika Hall

Chair: Despoina Xanthopoulou

- O171 Quality of Work Life Scale: Development and Psychometric Properties  
*Juana Patlan-Perez*
- O172 Developing a Measure of Emotional Intelligence for the Workplace  
*Victor Catano*
- O173 Psychometric Evaluation of the Norwegian Version of the Work-SOC Scale  
*Karoline Grødal, Siw Tone Innstrand*

## Oral session: Psychosocial interventions

15:45 - 16:45 Conference Room Ground Chair: Ana Sanz-Vergel

- O174 Enhancing Safety Preparedness of Young Workers  
*Mikko Nykänen, Jukka Vuori*

- O175 Maintaining Student Well-being During the Exam Period: A Randomised Controlled Trial Using an Evaluative Conditioning Procedure  
*Laurentiu Maricutoiu, Dragos Iliescu*
- O176 Mindful Working: Effects of an 8-Week Corporate-Based Mindfulness Intervention  
*Machteld van den Heuvel, Matthijs Baas, Victorine Jansen*
- O177 StressPrevention@Work: a Strategy to Manage Work-Related Stress Including a Digital Portal, a Stepwise Approach and Learning Networks  
*Irene Houtman, Bo Havermans, Cécile Boot, Allard Van der Beek*

### Oral session: Diversity at work

**15:45 - 16:45    Conference Room 1                      Chair: Achim Elfering**

- O178 Gender Stereotypes in Health Professions  
*Smaragda Skordi*
- O179 Neurodiversity - Autism and Work  
*Timo Lorenz, Kathrin Heinitz*
- O180 Does a Job Promotion Affect Men and Women's Health Differently? Dynamic Panel Models with Fixed Effects  
*Anna Nyberg, Paraskevi Peristera, Hugo Westerlund, Gunn Johansson, Linda L. Magnusson Hanson*

### Oral session: Working hours and time pressure

**15:45 - 16:45    Conference Room 2                      Chair: Sandrine Schoenenberger**

- O181 Investigating the Factorial Structure and Availability of Work Time Control in a Representative Sample of the Swedish Working Population  
*Sophie C. Albrecht, Göran Kecklund, Philip Tucker, Constanze Leineweber*
- O182 Does Control Buffer Negative Effects of Time Pressure on Employee Well-Being? - The Role of Demand-Resource Match  
*Barbara Stiglbauer*
- O183 The Moderating Role of Work-Related Smartphone Use in the Day-Specific Link between Self-Control Demands and Employees' Well-Being  
*Lilian Gombert, Wladislaw Rivkin, Klaus-Helmut Schmidt*

### Closing Ceremony

**16:45 - 17:30    Olympia Hall**

### Open Meeting: Resources in Occupational Health Psychology

**17:30 - 18:30    Panorama Hall                      Chair: Despoina Xanthopoulou, Ana Sanz Vergel & Karina Nielsen**

- Sp14 Resources in Occupational Health Psychology: Open Meeting  
*Despoina Xanthopoulou, Ana Sanz Vergel, Karina Nielsen*



# **KEYNOTE PRESENTATIONS**

## **EAOHP Fellowship Keynote Address: Employment precariousness: The need to understand and change an emerging social determinant of health**

Joan Benach

*Pompeu Fabra University, Barcelona, Spain*



Professor Joan Benach is Senior Researcher, Director of the Health Inequalities Research Group-Employment Conditions Network (GREDS-EMCONET), and Associate Professor of Public Health and Occupational Health in the Department of Political and Social Sciences at the Pompeu Fabra University (Barcelona, Catalonia, Spain). He has appointments at the Johns Hopkins University (Baltimore, US), the University of Toronto (Toronto, Canada), and the University of Alberta (Edmonton, Canada). Professor Benach has a varied academic background that includes a MD, a MPH, and a degree in Preventive Medicine and Public Health in the Autonomous University of Barcelona. He studied Contemporary History in the Autonomous University of Barcelona, Methodology of Social Sciences in the University of Barcelona, Health Policy in the University of

California at Berkeley (US), and obtained a PhD in Public Health (Health Policy) in the Johns Hopkins University.

For over two decades, Joan Benach has collaborated extensively with leading social epidemiologists, public health experts, members of social movements, unions, and other social groups in Catalonia, Spain, the European Union, North and Latin America, and other regions of the world. He has been consultant to the WHO and Ministries of Health of countries such as Spain, Chile and Bolivia, having participated in numerous Scientific Commissions. For example, between 1993 and 1996 carried out the Spanish Black Report on Health Inequalities commissioned by the Spanish Ministry of Health. Between 2005 and 2008 worked for the WHO Commission on Social Determinants of Health chairing the Employment Conditions Knowledge Network (EMCONET) that published the Report "Employment, Work, and Health Inequalities: a Global Perspective" (later on published as a book). In 2010 participated in the working committees that developed the Report "Fair Society, Healthy Lives" (Marmot Review), and in the Scientific Commission on Social Determinants of Health Inequalities in Spain.

Main research contributions of Professor Benach include original analyses on Social Determinants of Health such as Precarious Employment and other Employment Conditions, the health intersections between Social Class, Gender, Migration and Geography, and the development of Health Policy analysis and methods. Professor Benach has lead many research projects in Europe, Latin America and elsewhere, and has given numerous presentations, seminars, and courses on the aforementioned subjects. He also has extensively developed many Knowledge Transfer (KT) activities including the publication of books and reports on Social Determinants in Health Inequalities (Spain: 1996, 2011; Catalonia: 2003, 2005), and Small---Area mortality Atlases (Spain: 2001, 2012; Catalonia: 2005). He has over 200 publications on these and other public health topics. Other examples of his KT activities include the publication of books for lay people such as "Learning how to look at health: how social inequalities damage our health" (2005), "Health Care is for Sale" (2012), "How they market with your health" (2014), "Without work, rights and fear" (2014), collaborations in leaflets such as "Public Health has no borders" (2010), or "Understanding Health as Human Right" (2014), as well as abundant interventions in the mass media.

## **Abstract:**

Employment precariousness is an emerging social determinant encompassing both employment and working conditions that affects the health of workers, families, and communities. Its recent popularity has been spearheaded by three main developments: the generalization of flexible labour markets, with the declining influence of unions and the degradation of social protection; the growing interest on social determinants of health, including employment conditions and precarious and informal employment; and the increase of new instruments, tools and initiatives to understand, measure, and change employment precariousness. Yet, its study remains in its infancy. Employment precariousness need to be understood as part of a progressive continuum from extreme forms of precariousness towards more secure forms of employment such as permanent full-time employment. Research tasks to be developed include the need to obtain more precise definitions, a detailed understanding of the pathways and mechanisms (how and why precariousness might affect health), much stronger information systems, and better tools for the design, implementation and evaluation of policies to reduce precariousness and its health-related effects.

In this keynote speech, Professor Joan Benach will reflect on this crucial public health and occupational health topic addressing three key questions: What are the main historical, economic, and political factors that have increased precarious employment? What are the main concepts, theoretical models, measurement instruments, and findings linking precarious employment and health? And what are the key challenges for scientific research and policy change?

## **EAOHP Distinguished Keynote Address: The challenge of burnout in contemporary society**

Christina Maslach

*University of California, Berkeley, USA*

Christina Maslach received her A.B., magna cum laude, in Social Relations from Harvard-Radcliffe College in 1967, and her Ph.D. in Psychology from Stanford University in 1971. She has conducted research in a number of areas within social and health psychology. However, she is best known as one of the pioneering researchers on job burnout, and the author of the Maslach Burnout Inventory (MBI), the most widely used research measure in the burnout field. In addition to numerous articles, her books on this topic include *Burnout: The Cost of Caring*; the co-edited volume, *Professional Burnout: Recent Developments in Theory and Research* (with Wilmar Schaufeli); and three publications with Michael Leiter -- *The Truth About Burnout*; *Preventing Burnout and Building Engagement: A Complete Program for Organizational Renewal*; and *Banishing Burnout: Six Strategies for Improving Your Relationship with Work*. The two latest publications are based on Professor Maslach's work as a consultant with various organizations on issues of job burnout.



In 1997, Professor Maslach received national recognition as Professor of the Year, an award made by the Carnegie Foundation and the Council for the Advancement and Support of Education (CASE). Among Professor Maslach's other honors are the presidency of the Western Psychological Association, the Distinguished Teaching Award and the Social Sciences Service Award from the University of California at Berkeley, and her selection as a Fellow of the American Association for the Advancement of Science (which cited her "For groundbreaking work on the applications of social psychology to contemporary problems").

Professor Maslach is currently the Chair of the Academic Senate. Her prior administrative positions include the Vice Provost for Undergraduate Education, Faculty Assistant (to the Chancellor) on the Status of Women, and Vice-Chair of the Psychology Department. She also chaired the Chancellor's Commission on Responses to a Changing Student Body and wrote its final report, Promoting Student Success at Berkeley.

### **Abstract:**

Burnout is a phenomenon that reflects a major problem in people's relationship with their work. In earlier decades, the source of the problem was largely the chronic emotional strains of working with people in human services. In recent years, the problem seems to be more deeply rooted in the policies and practices of various workplaces, which create other chronic sources of burnout. Indeed, the "burnout shop" of several decades ago seems to have been resurrected as a more basic model of business success, despite the associated human costs. What are some of the key themes of this shift over time, and what are the implications for the role of occupational health research and practice in ameliorating these problems?

### **Work & Stress – Routledge Keynote Address: Getting to grips with organizational interventions: What works for whom under which circumstances?**

Karina Nielsen

*Norwich Business School, University of East Anglia, Norwich, UK*

Karina Nielsen is Professor of Work and Organisational Psychology in the Employment Systems and Institutions Group in the Norwich Business School, the University of East Anglia UK, a research affiliate at the CPH-NEW, USA and Karolinska Institutet, Sweden, and Honorary Professor at the University of Leicester, UK. Her research interests lie within the area of new ways of working and job redesign. She is particularly interested in the evaluation of organizational interventions and ways to develop methods to understand *how* and *why* such interventions succeed or fail. She has published more than 100 articles, books and book chapters in international outlets. She is currently on the editorial boards of *Human Relations*, *The Leadership Quarterly* and *Journal of Business and Psychology* and is an associate editor of *Work & Stress*. She has published her work in journals such as *Human Relations*, *Work & Stress*, *Leadership Quarterly*, *Journal of Occupational Health Psychology* and *Journal of Organizational Behavior*.



She is currently the principal investigator on the “Out of sight, out of mind project” on good occupational health and safety leadership in distributed workers funded by the Institution of Occupational Health and Safety, a co-investigator on the “What effects does implementation have on health-promotion program results? – a collaborative project in four Nordic countries”, led by Karolinska Institute and funded by The Joint Committee for Nordic research councils in the Humanities and Social Sciences (NOS-HS), the lead for the work and wellbeing theme of the Employment Systems and Institutions Group led Work, Learning and Wellbeing Evidence Programme of the UK’s Economic and Social Research Council What Works Well-being Centre.

## **Abstract:**

Current legislation in the countries of the European Union emphasize organizational occupational health interventions (making changes in the design, organization and management of work to ensure employee health and wellbeing) as an important mean to improve employee health and well-being. Several national policy bodies have developed frameworks that may aid organisations in living up to these legal requirements. Some of the most prevalent are the Management Standards (UK), SOBANE (Belgium), WorkPositive (Ireland), START (Germany) and INAIL-ISPEL (Italy). Together, these frameworks provide guidance for how organizations may design, implement and evaluate organizational interventions to improve working conditions and employee health and wellbeing using a phased approach. One limitation of these frameworks is, however, that they are rarely scientifically evaluated.

In 2010, I conducted a review on the frameworks available at the time and evaluated the state-of-the-art scientific evidence on how to design, implement and evaluate organizational interventions. Since then the field of organizational occupational health interventions has made much progress. In my keynote, I will briefly review current national frameworks for managing employee health and well-being through changing the way work is organized, designed and managed and based on an updated review of the scientific research on organizational occupational health interventions I will critically review the scientific evidence for these frameworks.

One of the key contributions of recent research on organizational occupational health interventions is the understanding of how intervention processes and the context within which the intervention is implemented play a major role in determining intervention outcomes. This understanding has led to a call for moving beyond the simple question of whether an intervention works or not to asking the questions of what work for whom in which circumstances. In other words, we need to identify which aspects of the process that influence intervention outcomes. Some of these aspects I will discuss include 1) the role of employees and line managers in making changes happen, 2) the use of specific tools to facilitate the intervention process and 3) the importance of integrating the project into existing structures.

Based on this review, I will present reflections and recommendations for how organizations may design, implement and evaluate organizational occupational health interventions in the attempt to ensure employee health and wellbeing.





## **Sp1: Management of Psychosocial Risks and Work-Related Stress: National Experiences based on the Management Standards Approach and the Way Forward in Europe**

Co-Chairs: Karina Nielsen<sup>1</sup> and Sergio Iavicoli<sup>2</sup>

<sup>1</sup>University of East Anglia, Norwich, UK, <sup>2</sup>INAIL, Rome, Italy

Speakers: Sergio Iavicoli<sup>1</sup>, Peter Kelly<sup>2</sup>, Patricia Murray<sup>3</sup>, Malgorzata Milczarek<sup>4</sup>

<sup>1</sup>INAIL, Rome, Italy, <sup>2</sup>Health and Safety Executive, Liverpool, UK, <sup>3</sup>University of Liverpool, Liverpool, UK, <sup>4</sup>EU-OSHA, Bilbao, Spain

Starting from the 2004 European Framework Agreement, work-related stress and psychosocial risks were included in the agenda of policy makers and main international institutes and bodies for prevention of occupational health and safety. The European Framework for Psychosocial Risk Management (PRIMA-EF) answered to the need for providing a framework to promote policy and practice at national and enterprise level within the European Union. PRIMA-EF identified key aspects, stages and best practice principles in psychosocial risk management at work as an umbrella of EU good practices. After around a decade, initiatives and methodology set out at national level are several.

This special session aims to offer a portrait of the EU methodologies for the management of psychosocial risks focussing on national experiences based on the HSE Management Standards. An introduction on the EU framework with special reference to the PRIMA-EF and the origins of the Management Standards approach opens the session. Three national experiences based on the Management Standards (namely UK, IR, IT) approach will then follow. Finally, future steps and challenges in the management of psychosocial risks and work-related stress in Europe will be reported by a representative of EU-OSHA as a wider European perspective and to open the debate on needs and challenges to move towards the development of an integrated monitoring system at European level.

## **Sp2: Meet the Editors Session @ EAOHP 2016**

Chair: Despoina Xanthopoulou

*Aristotle University of Thessaloniki, Greece,*

The 12th EAOHP Conference is proud to introduce a "Meet the Editors" session. The aim of this session is to present some of the most prominent journals in area of Occupational Health Psychology in order to help prospective authors understand what it takes to be published in these journals and why papers are rejected. These journals will be represented by their Editors or Associate Editors, who will present the aims and scope, the publication policy, and what they think is a good paper for their journal.

1. Ulla Kinnunen and Karina Nielsen will be representing **Work & Stress**.
2. Evangelia Demerouti and Kevin Kelloway will be representing the **Journal of Occupational Health Psychology**.
3. Christina Maslach and Michael Leiter will be representing **Burnout Research**.
4. Stavroula Leka and Aditya Jain will be representing **Safety Science**.
5. Laurenz Meier and Despoina Xanthopoulou will be representing the **Journal of Personnel Psychology**.

At the end of the session, there will be time for an open discussion with the public, where participants will have the opportunity to pose questions to the journals' representatives.

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## **Practitioner Focus Session: Policing and Wellbeing**

Chair: Peter Kelly

*Health and Safety Executive, Liverpool, UK*

### **Sp3: An Integrated Workplace Mental Health Intervention in a Policing Context in Australia**

Amanda Allisey

*Deakin University, Melbourne, Australia*

This presentation will discuss the implementation and effectiveness of a workplace mental health intervention in the state-wide police department of the south eastern Australian state of Victoria. The primary aims of the intervention were to improve psychosocial working conditions and mental health literacy, and secondarily to improve mental health and organisational outcomes.

Research in the Australian context as well as internationally has identified police work as being particularly stressful. High levels of job stressors in police have been linked to burnout, work-family conflict, depression, intimate partner violence, psychological distress and suicide. As in other occupations, organisational sources of job stress such as high job demands (e.g., time pressures and work overload), low supervisor or collegial support and low levels of control (i.e., latitude in deciding how to do one's work) have been found to be significant sources of stress in police. This paper will outline what we have been doing with Victoria Police over the last couple of years to address the issues above.

### **Sp4: Psychosocial (Stress) Risk in Policing in Two Police Forces the UK**

Peter Kelly

*Health and Safety Executive, Liverpool, UK*

This presentation will set out to show the profile of the police workforce's health, wellbeing, operational effectiveness and exposure to psychosocial hazards (stressors) and identify psychosocial hazard (stressor) exposures linked to impaired health, wellbeing, and operational effectiveness. What has been found is that the health, wellbeing, and operational effectiveness profile of officers is below that found in the general working population in the UK. Exposure to certain potentially modifiable psychosocial working conditions is associated with elevated odds of negative outcomes. Modification may be possible at little financial cost. Work is required on the standardisation of best practice attendance management procedures. Both forces involved in the studies described have implemented various initiatives in response to these findings, including a wellness strategy, resilience training, review of attendance management procedures, and role-specific interventions.

## **Practice Forum: Occupational health psychology practices in times of austerity**

Chair: Peter Kelly<sup>1</sup>

Discussant: Anastasia Rush<sup>2</sup>

<sup>1</sup>*Health and Safety Executive, Liverpool, UK, <sup>2</sup>Hellas EAP Ltd, Athens, Greece*

"Work practices, processes and conditions are constantly changing in Europe. This shift in the world of work introduced situation risks that affect the health and safety of employees' having high costs in terms of employees' health, absenteeism and decreased performance. Societal factors, including economic recession aggravated workplace challenges and psychosocial risks in Europe and especially in Greece. In this symposium, best practices from Europe will be presented as well as occupational health practices implemented by Organisations and Professionals in Greece. In the symposium the following four topics will be presented.

Best practices in occupational health will be introduced concerning intervention methods that have been utilized in managing psychosocial risks during times of change and work place instability across Europe. The contribution of occupational health practices through Employee Assistance Programs (EAPs) in Greece will be presented. The audience will become familiar with a unique model implemented by Hellas EAP, designed to manage psychosocial risks and workplace challenges that were either raised or escalated due to mergers, acquisitions and other changes that economic and societal recession has imposed on Greek enterprises. Such model encompasses the assessment of needs through Psychosocial Risks & Impacts in the Workplace (PRIWA) and the design of customized interventions that fit the enterprises' specific needs aiming to enhance occupational health and well being and create a resilient organizational culture. A range of innovative prevention and intervention methods will be introduced that were designed to manage specific work place challenges that enterprises from different sectors were facing from the beginning of austerity up until now.

Adding to the above, the role of EAP's in building resilient organisations in Greece will be formulated further, with a case presentation. In particular, Piraeus bank will present the development of the Organisational Health Department and the spectrum of activities, including EAPs, that were implemented since 2007, for the promotion of Occupational Health Psychology in the workplace. Also, a presentation will be included in the symposium concerning the development of Corporate Health Psychology and Psychiatry in Greece and the significant contributions that have been made for the promotion of occupational health in Greek enterprises.

#### **Sp5: The Contribution of Employee Assistance Programs in the Development of Occupational Health Practices in Greece**

Anastasia Rush

*Hellas EAP Ltd, Athens, Greece*

Employee Assistance Program (EAP) is an internationally well-known brand that refers to worksite based programs implemented to address a series of workplace challenges that respond to the needs of both employers and employees. For more than four decades, EAP has demonstrated its evolving value in promoting health and well being in the workplace globally, by following a comprehensive approach based on internationally recognized standards. In 2005, Hellas EAP has been established in Greece, providing strategic interventions to organizations in order to optimize safety and health in which employees will be able to achieve high performance, well being and job satisfaction and contribute in creating a resilient corporate culture with high productivity outcomes. The changes that have been made in the world of work and the risks that have emerged due to the prolonged economic and social crisis, created the need to constantly, promote occupational health at an individual and corporate level. In particular, the need to manage challenges to safety and health in an organizational context such as occupational stress, caused by psychological, organizational and social factors, as well as to enhance employees' well being and resilience led to the implementation of occupational health practices through Employee Assistance Programs.

Core EAP services adapt psychological models to occupational health contexts providing brief interventions based on a holistic approach, so as to meet the needs of both employees and employers. The programs considered as Core EAP are as follows: 24/7/365 Support and Crisis Line, Face to Face Counseling and Critical Incident Response. Hellas EAP capturing on time the emerging risks and needs has gone above and beyond in providing the classic form of Employee Assistance Programs. The workplace challenges that escalated due to economic and societal recession imposed the construction of new programs implemented to meet the specific needs of different enterprises. Also, the statistical data gathered through Core-EAP

services constantly reveal workplace challenges at individual and corporate level. The key role of Hellas EAP is to review, assess and analyze work environments and design customized programs and interventions to meet client needs.

Hellas EAP developed and applied innovative methods and programs in order to assess and manage work related issues that affect employee's well being as well as organizational productivity – related variables e.g. job satisfaction, presenteeism and organizational commitment. The assessment of needs is conducted through Psychosocial Risks and Impacts in the Workplace Assessment (PRIWA) that in conjunction with other assessment methods can lead to accurate identification of workplace challenges and issues impacting on employees' health. The interventions and activities designed are based on the results of the needs assessment and consist inter alia of policy planning on corporate well being, training and development programs such as 'Building resilience', 'Managing people during change and restructuring'. The effectiveness of the interventions and the quality of services are assessed through evaluation and satisfaction surveys. Adding to that, research is conducted to evaluate the workplace effects of EAP counseling administering a five scale outcome tool specifically designed for EAPs, utilized as a Pre/Post measure.

#### **Sp6: Relations between Bundles of HR Practices and Sustainable Work Ability**

Marc Gersen, Ety Wielenga, Annet de Lange, José Cuperus, Mathijs Timmermans  
*HAN University of Applied Sciences, Arnhem, The Netherlands*

From a management perspective, there is accumulating (research) attention on the question of how we can develop and maintain a sustainable ageing workforce with a high level of work ability (Hedge, Borman, & Lammlein, 2006; Hertel et al., 2014; Shultz & Wang, 2011). Work ability expresses the extent to which an employee is capable of working in the present and in the near future, taking his or her own physical and mental resources as well as the requested level of work demands into account (Ilmarinen, 2001; Ilmarinen & Tuomi, 1992). Only, few studies have examined relations between bundles of HR practices and work ability of ageing workers (De Lange, Kooij, Van der Heijden, 2015).

In this new survey study, we aimed to examine relations between the perception and use of HR practices and work ability of ageing workers working in an educational institute (N = 1419; % response rate). Correlational as well as regression results revealed only significant relations between poor work ability and the use of accommodative HR practices (Kooij, 2010; Kooij, Jansen, Denny & De Lange, 2014). We will pay attention to the implications of these results in relation to theory as well as practice.

#### **Sp7: The Implementation of Organisational Health Practices in Piraeus Bank Group**

Evi Chassapoyianni

*Piraeus Bank, Athens, Greece*

Piraeus Bank (PB) Group operates fully acknowledging that employees constitute a key success factor for any organised activity aimed at achieving Group strategic goals. In this perspective, the organization reinforces and empowers its human resources with innovative developmental and support programs that involve all aspects of their lives to embrace a well-being culture.

Within the framework of the Groups' Corporate Responsibility and with active care for the holistic well-being of the employees and the organization, Piraeus Bank provides Employee Assistance Programs services since 2007. The EAPs were launched in the Bank in parallel with the commencement of the financial crisis in the country. Within this critical situation, PB

chose to invest in innovative programs with focus on empowerment and assistance, thus showing the proactive culture that characterizes its management team. EAPs are coordinated internally from specialists in the area of mental health, through the Organizational Health department of the Group HR. The programs are implemented through Hellas EAP, the leading certified EAP provider in Greece. Through the EAP services, all employees of the Bank and members of their families have the opportunity to make use of proactive psychosocial assistance services that aim to empower them in all aspects of their lives: personal, family and work related. Specifically, they are eligible to make use unlimitedly of a 24/7 help line, and 5 face to face sessions with certified specialists. In cases of traumatic events the support is also provided to the customers that witnessed the experience. The services are volunteer, free of charge and totally covered by confidentiality. In addition, since 2010, we have initiated the Expatriation EAP Program for the employees of the Group in order to assist their smooth transition to the new culture.

In that respect and with the aim to ensure the reduction of operational risk of the organization that is due to human factor, Piraeus Bank has initiated the Behavioral Risk Management service since 2011. In 2014, with the aim to guarantee a psychosocially health work, PB initiated the Disability Management service to assist employees with chronic illnesses for their smooth transition in the workplace. All the above services and products are also embraced by differentiated actions and programs that are designed through the years to fit the needs of the employees and their families.

Employee's participation in the programs is significant along with the acceptability and satisfaction levels that surpasses so far the international benchmarks. In accordance, the programs are dynamic and systematically customized according to qualitative and quantitative results provided by the external EAP provider. The annual ROI report also confirms the positive dual impact of the EAPs for the organisation and the employees. Over the 8 years of implementation, the services were designed and developed gradually according to the emerging challenges of the organization. To date, PB is alert towards new services and actions that ensure the organizational health of the organization, foreseeing the evolving socio economic reality, and in alignment with the business priorities.

### **Sp8: The Evolvement of Corporate Psychiatry in Greece: The Hellas EAP Paradigm**

George Georgantopoulos

*Hellas EAP Ltd, Athens, Greece*

Corporate psychiatry is an informal subspecialty providing interface between individual mental health and the system dynamics of the work organisation, representing an extension of psychiatric knowledge to everyday functioning of individuals in the organisations. It integrates information derived from medical disciplines, social sciences and organisational development. Several organisations such as the American Psychiatric Association and the American Academy of Organizational and Occupational Psychiatry support exchange of information on this field. It is an independent section of World Psychiatric Association, while this is not the case with European Psychiatric Association.

Although psychiatrists consider mental health problems emerging as a combination of biological, social and psychological factors and that work is central to personal identity and mental health, patients' experiences in the workplace have not been a central focus in clinical practice. However, the interaction between work and mental health is confirmed by research and interest has increased in the past decade. The three main areas of practice are direct clinical services, consultation, and applied research. These include evaluating disability, providing case management for employees who receive psychiatric treatment, evaluating

candidates for an executive position and conducting epidemiological research. The field requires an entrepreneurial spirit and offers opportunities for those with varying interests ranging from psychotherapy to psychopharmacology, from executive coaching to disaster medicine.

In Greece, this field of psychiatry has not been formally accredited. It has not been recognised as a subspecialty of Psychiatry nor a part of the residency schedule. It is not represented as a section of the Hellenic Psychiatric Association and there is no postgraduate course on this subject, explaining the very low tendency for psychiatrists to choose this field. Moreover, the business world and psychiatrists seem sceptical of each other. It is unclear whether this is due to the association of psychiatry with severe pathology, a perceived bias against business on the part of psychiatrists, or a combination of these and other factors.

The constant changes that have been made in the workplace and the challenges that have escalated due to socio-economic crisis require a systematic development and implementation of Corporate Health Psychology and Psychiatric practices both in Greece and in Europe. Efforts are made to introduce such specialty in Greek enterprises so as to efficiently promote well-being and healthy functioning in all aspects. This will be done by integrating the applications of Corporate Psychology and Psychiatry in the field of Employee Assistance Programs. Interventions in the workplace includes amongst other prevention, diagnosis, liaison in collaboration with occupational health providers and rehabilitation in collaboration with the management. As mental health still carries a significant stigma, a task of priority is the increase of awareness on mental health issues, reduction of stigma and discrimination through educational activities and consultation of management, occupational health professionals and personnel. In this presentation we will focus on the evolvement of this department within Hellas EAP and the contributions that have been planned for the promotion of occupational health in Greek enterprises.

### **Research Forum: Doctoral, Masters Students and Young Researcher Showcase**

Chair: Birgit Greiner

*University College Cork, Cork, Ireland*

### **Sp9: Just After Completion: Personal and Workplace System Factors of Obstetrical Nurses in Northeastern Ontario, Canada: Using the Work Disability Prevention Framework**

Behdin Nowrouzi<sup>1</sup>, Nancy Lightfoot<sup>1</sup>, Lorraine Carter<sup>2</sup>, Michel Lariviere<sup>1</sup>, Ellen Rukholm<sup>1</sup>, Diane Diane Belanger-Gardner<sup>1</sup>

<sup>1</sup>*Laurentian University, Sudbury, Canada*, <sup>2</sup>*McMaster University, Hamilton, Canada*, <sup>3</sup>*Health Sciences North, Sudbury, Canada*

**Background and Methods:** The objective of this project was to examine the relationship between personal and workplace system factors, and work ability index scores for nurses working in obstetrics in northeastern Ontario, Canada. A total of 111 registered nurses were randomly selected from the total number of registered nurses on staff in the labor, delivery, recovery, and postpartum areas of four northeastern Ontario hospitals (Sudbury, North Bay, Timmins and Sault Ste. Marie). We used the Work Disability Prevention Framework to explore the relationship between work disability and work ability using multiple regression.

**Results:** A total of 51 (45.9% response rate) online questionnaires were returned and another 60 (54.1% response rate) were completed using the paper format. The obstetric workforce in northeastern Ontario was predominately female (94.6%) with a mean age of 41.9 (s.d. = 10.2). Two models using the personal and workplace system factors were considered. In the personal

systems model, three factors: marital status ( $p = 0.025$ ), respondent ethnicity ( $p = 0.026$ ), and mean number of patients per shift ( $p = 0.049$ ) significantly contributed to the variance in work ability scores. In the workplace system model, two factors, job and career satisfaction ( $p = 0.026$ ) had a significantly positive influence on work ability scores, while work absenteeism ( $p = 0.023$ ) demonstrated a significantly inverse relationship with work ability scores. In the final (combined) model, all the factors were significantly related to work ability scores.

Conclusion: Work ability is intimately related to job and career satisfaction, and perceived control at work among obstetric nurses. Therefore, nurses, employers and health policy makers need to create and foster environments that improve work ability. Such an approach may also increase nurses' decision-making capacity in the workplace and boost job and career satisfaction.

### **Sp10: Just After Completion: Does Chronic Work Stress Matter? Trajectories of Working-Conditions and Employees Health and Well-Being 10-Years Later**

Ivana Igic<sup>1</sup>, Anita Keller<sup>1</sup>, Achim Elfering<sup>1</sup>, Wolfgang Kealin<sup>1</sup>, Franziska Tschan<sup>2</sup>, Norbert K Semmer<sup>1</sup>

<sup>1</sup>University of Bern, Bern, Switzerland, <sup>2</sup>Université de Neuchâtel, Neuchâtel, Switzerland

Stressful working conditions have been linked to various health impairments in cross-sectional and longitudinal studies and chronic and long-lasting stress reactions are assumed to be particularly harmful to human health and well-being and even at least partially irreversible (e.g. "accumulation model" by Frese & Zapf, 1988). The number of the longitudinal studies has been growing in the last decade, however there is a lack of studies that explicitly address:

- 1) The history of exposure to work characteristics (cumulative exposure) over longer time;
- 2) Irreversibility or chronification of health effects due to exposure to conditions at work over time.

Studies that include history of exposure to work conditions over longer period usually operationalized it by defining the subgroups of individuals determined by number of waves in which they were exposed to favorable vs. unfavorable working characteristics, and compare them in regard to health indicators. This kind of analysis is great improvement over the "common" longitudinal studies; nevertheless, there are some methodological weaknesses of this kind of operationalization (e.g. dichotomization of one quantitative measure to predefine whether one has high or low level of work demands).

The irreversibility of the effects has almost never been tested. To analyze the irreversibility the distinction between concurrent vs. chronic stressors seems to be of importance. The working conditions that are unfavorable in the every wave are also unfavorable in the wave when the outcomes were assessed. Therefore its important to explore does effects still remains significant after adjustment for the level of current working conditions.

The study is based on ten-year longitudinal data (5-waves) among young workers in five occupations over their first ten years in the labor market ( $n=483$ ). We applied latent growth mixture modeling (GMM) to estimate the history of exposure to work characteristics. GMM estimated different long-term growth curves formed by five task-related stressors, job control, and the social stressors. It was tested if four outcomes in t5 differ between trajectories, adjusted for the baseline value of the respective outcome and cumulative private stressors. To test the irreversibility of the effects the current conditions at work were additionally adjusted.

Results support the hypothesis that multiple longitudinal change patterns or trajectories of working conditions over a 10-years could be identified. The best fitting model had 5 classes, of which two were characterized by unfavorable, and three by favorable constellations of working



conditions and its development. We compared groups using contrasts. The unfavorable group "Active Job & High Social Stressors" ("AJHSS") differed from the favorable groups for all outcome variables, the unfavorable group "High Strain Change" ("HSC") group for all except BMI. Additionally controlling for current working conditions at t5, these differences were maintained for rumination and job satisfaction in the HSC, and for all except for rumination for the AJSS group. Although, unfavorable classes were small, their well-being indicators at t5 were lower than in the favorable classes. The history of exposure is important, indicating that some symptoms have become chronic. Our results also suggest that social stressors at work are especially important.

### **Sp11: The Grand Doctoral Plan: Does a Physical Activity Intervention Improve Wellbeing among University Employees?**

Clare Smith, Mariana Kaiseler, Jim McKenna, John Hamilton, Becky Wride  
*Leeds Beckett University, Leeds, UK*

**Background:** Staff in UK Higher education institutions regularly experience change, impacting on organisational resources and wellbeing. Wellbeing has been associated with improved work performance and physical activity (PA) with reduced incidence of chronic diseases. Hence, interventions promoting wellbeing and PA in the workplace are likely to increase productivity, improve employees' health and reduce employer costs. However, despite these potential positive outcomes, limited conclusions exist on the efficacy of interventions and their respective impact on employees' wellbeing, particularly among university employees.

**Objectives and method:** To investigate the impact on PA levels and measures of wellbeing in university employees. The Step into Summer Challenge was devised and managed by the Leeds Beckett University Wellbeing team. After advertising on the staff intranet, 380 participants registered i.e. 11% of total headcount. Pre- and post-challenge data were available for 165 participants; 133 females, 22 academics, 135 professional and support staff and 8 managers. Of these participants, 85%+ were aged 26 to 55. Each five-person work team was set the objective of walking the equivalent distance of Land's End to John O'Groats (equating to 10,000 steps per team-member per day) within a six-week challenge period via a prescribed route. Social media was used to promote the challenge and encourage participation. A weekly email contained a link to an interactive Google Map showing 'virtual' progress. Pedometer scores recorded step counts; these were updated weekly into a central spreadsheet. Mental wellbeing levels were assessed using the 7-item Warwick-Edinburgh Mental Well-Being Scale (SWEMWBS). PA was assessed using the International Physical Activity Questionnaire (IPAQ-SF). After securing university ethical approval, intervention effects were explored by evaluating the associations between pre- and post-challenge data.

**Results:** An overall increase in median PA levels, measured in Metabolic Equivalent of Task (MET) minutes per week, was observed from 2,595 to 3,504. This broadly equates to four additional hours of walking ( $d=0.42$ ). No significant changes in PA were observed for managers or for staff aged 16-25. An increase in mean wellbeing scores was observed from 22.64 to 23.69 (potential score range 7-35) ( $d=0.34$ ). No significant changes in wellbeing were observed for males, academics, managers or staff aged 36+. PA levels increased for 105 participants, while wellbeing scores increased for 93 participants. There was a weak non-significant positive correlation between change in PA and change in wellbeing scores ( $r=0.1$ ,  $p>0.05$ ).

**Conclusions:** The six-week challenge resulted in a powerful increase in PA levels and wellbeing scores amongst participants. These data confirm the strength of short-term, team-based, positively reinforcing interventions. Allowing for the limitations of sampling and recruitment, effect sizes indicate that these interventions may offer powerful Public Health benefits for



university employees. Follow-up data are currently being collated to measure the longer-term impact on these variables. Further research is required to explore variances in participation rates and scores by gender, age-group and role to develop more inclusive interventions. In addition, qualitative research is required to explore the experience of organisational change and its impact on PA and wellbeing.

## **Sp12: The Grand Doctoral Plan: Using Knowledge Management to Promote Psychosocial Risk Management: An Enterprise Level Perspective**

Tolulope Fadipe

*University of Nottingham, Nottingham, UK*

As our society advances under the influence of novel technology and ever-changing economic and social environments, so do our workplaces, work practices and processes subject to constant changes (European risk observatory, 2015). These new conditions bring with them new and emerging risks and challenges for workers and employers which demand the implementation of various approaches that ensure high levels of health and safety is maintained at work. One of these occupational safety and health risk is psychosocial risks which are known to have a negative impact on workers' mental and physical health as well as organisational health (motivation, commitment, productivity) due to the exposure of workers to psychosocial hazards.

At the policy level (Jain et al., 2014), legislations that are clearly directed at psychosocial risks, work-related stress, mental health in the workplace, harassment and bullying with reference to risk evaluation for psychosocial risks as an employer responsibility have been entrenched. Despite this prognosis, there is doubt as to whether these specific legislations will achieve the desired outcomes, since interventions as opposed to preventive actions still seem to be lacking across countries. Notwithstanding a common legal framework in EU which covers all forms of hazards to workers' health, there appears to be limited awareness of this provision both by employers and other key stakeholders. Despite various psychosocial risk management (PRM) initiatives, there is still high levels of difficulty in tackling psychosocial risk (ESENER, 2009).

There is an urgent need to reduce the threat which these risks pose to employees and enterprises. In an attempt to find a solution to this problem, and since studies have established significant connections between knowledge factors and enterprise innovation, performance and economic growth, while knowledge integration within the organisation has been linked to product development effectiveness, reduced defect density by improving efficiency, lowered warranty defects, and increased software development efficiency; it suffices to investigate the manner through which knowledge management could impact the promotion of psychosocial risk management.

Based on these assertions, this study aims to determine how knowledge management can be an integral part of psychosocial risk management process, as a complementary approach within the enterprise, in attaining improved enterprise performance, by determining the role of key factors and processes in psychosocial risk management (PRM) and knowledge management (KM) using documentary data to examine how businesses use rhetorical devices to construct a version of reality which improves their competitive advantage; to identify overlapping factors and processes between PRM and KM by adopting a thematic approach to reveal potential parallels or inconsistencies in patterns, associations, concepts, and explanations. Furthermore, a case-study scenario will extensively explore the complementary interaction that may exist between KM and PRM that can be used to improve workers' health. The final stages of this research will focus on determining how PRM can be used to promote

enhanced performance in knowledge economies using secondary data and the interview method as a tool to capture the stakeholders perspectives based on their area of expertise, as it relates to knowledge and psychosocial risk management concepts.

**Sp13: The Grand Doctoral Plan: Cross-sectional and Prospective Contribution of Socioeconomic Status and Demographic and Personal Factors, to the Eating Behaviours of Employees of Civil Servants.**

Judith Grant

*University of Nottingham, Nottingham, UK*

The aim of the current study is to examine the cross-sectional and prospective contribution of socioeconomic status (measured by education, income and occupation) and demographic and personal factors (age, gender, number of dependants and Body Mass Index (BMI)) on the eating behaviours of Northern Ireland Civil Service employees. Two specific eating behaviours are considered: eating past the point of being full and cost of food influencing purchasing behaviour.

Much of the academic research in this area focuses on community interventions. However, understanding eating behaviours in a workplace setting will enable the design of targeted interventions to improve dietary knowledge and habits, and thus improve employee health for the benefit of the individual, the workplace and the community.

The present analysis was part of a wider study designed to track a cohort of employees working for Northern Ireland Civil Service (NICS). NICS is a public sector organisation employing around 27,000 full time employees across 12 government departments and employees work in a range of professions/roles from industrial or administration/clerical roles, through to more senior executive roles, with a wide range of salaries. The 'Stormont Study' is designed to supplement and develop the body of research on the health and wellbeing of UK civil servants initiated by the London-based Whitehall II studies. The current study involved two surveys of the entire NICS workforce, one in 2012 and a second in 2014. The 2012 survey attracted 4436 complete responses and in 2014 there were 5642 complete responses, representing a 20% response rate.

All variables were measured using a single self-report anonymous questionnaire. In addition to collecting data on demographic and occupational variables, the questionnaire assessed a wide range of constructs of interest within the occupational health psychology domain. The focus of the current doctoral investigation is on items concerning eating behaviours. Two items, "how often do you eat past the point of feeling full?" and "To what extent does the cost of food influence what you buy?" were introduced into the 2014 survey in response to a literature review on the contribution of socio-economic status, demographics, and personal factors to the determination of these behaviours.

Cross-sectional and prospective hierarchical linear regression analyses were applied to the data. Early analyses indicated that among the demographic variables, age and BMI significantly influence both eating past the point of feeling full and the cost of food influencing purchasing behaviours. Among the three indices of socio-economic status only education significantly contributed to the model. This raises interesting questions about whether it would be appropriate to target health promotion activities at different age groups or for individuals who are obese or overweight in the workplace. These themes will be explored in more detail in the PhD study.

## **Sp 14: Resources in Occupational Health Psychology: Open Meeting**

Co-Chairs: Despoina Xanthopoulou<sup>1</sup>, Ana Sanz Vergel<sup>2</sup>, Karina Nielsen<sup>2</sup>

<sup>1</sup>*Aristotle University of Thessaloniki, Greece,* <sup>2</sup>*University of East Anglia, Norwich, UK*

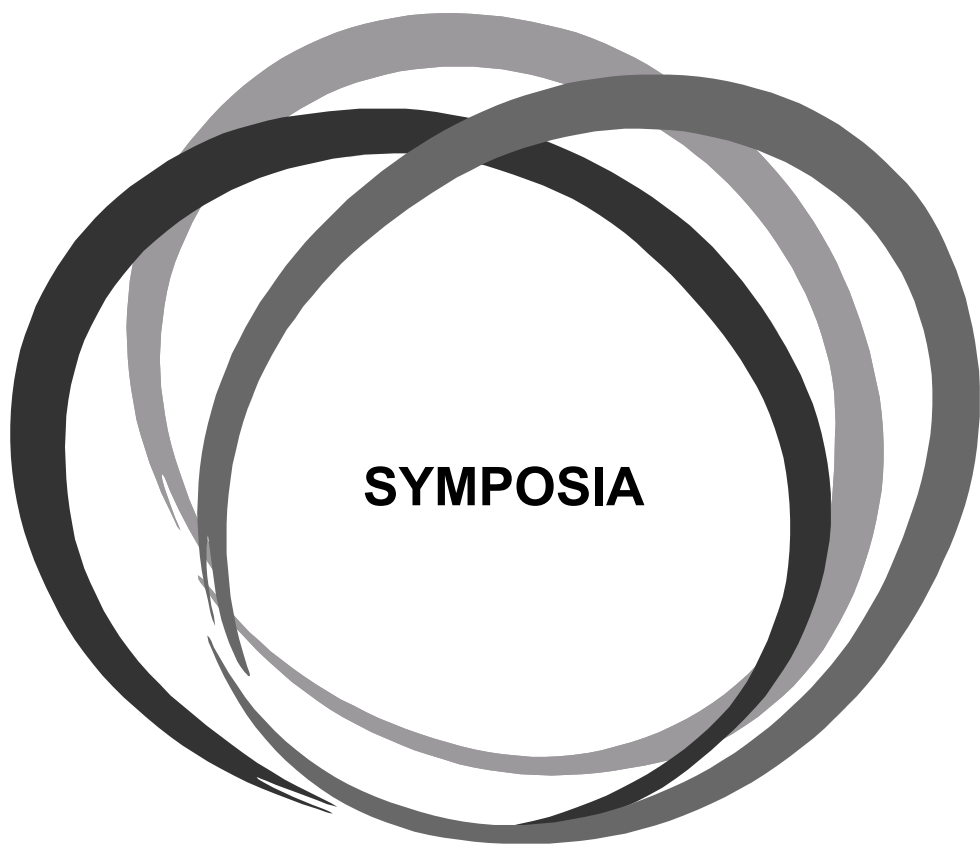
In September 2015, an EAWOP Small Group Meeting was held in Norwich. The topic of the meeting was "When, Where and for Whom are Job Resources Beneficial?" and the aim was to explore the conditions under which job resources have beneficial, neutral, adverse or mixed effects on indicators of well-being and performance.

The meeting was hosted by the Norwich Business School (University of East Anglia) and organised by Professors Kevin Daniels, Karina Nielsen, Olga Tregaskis (all University of East Anglia) and Marc van Veldhoven (Tilburg University).

As part of the meeting a number of outputs were agreed. In the present meeting we will provide an update of these outputs agreed and discuss ways forward. We welcome all interested in the topic to join and get involved in progressing a research agenda on resources at work.

### **Agenda:**

- 1) Update on the special issue on the meaning, nature and manifestation of job/resources (and demand), which will include a review editorial.
- 2) Update on special issue on context and antecedents of job resources (to include strategic HRM).
- 3) Preliminary network funding to raise awareness of the importance of resources at work.
- 4) Any other initiatives - e.g. network and travel funding, joint research projects?



# SYMPOSIA

## **Symposium: Surviving the financial recession in Greece: Empirical evidence on crisis-related factors for employee well-being**

Chair: Despoina Xanthopoulou<sup>1</sup>

Discussant: Evangelia Demerouti<sup>2</sup>

<sup>1</sup>*Aristotle University of Thessaloniki, Thessaloniki, Greece,* <sup>2</sup>*Eindhoven University of Technology, Eindhoven, The Netherlands*

The global financial crisis has imposed additional threats to employee health and well-being through the implementation of adverse organizational changes that engendered unfavorable working conditions. This deterioration in working conditions has been most evident in southern European countries, and particularly in Greece. Thus, organizations in Greece offer a relevant setting to investigate the impact of the financial crisis on employee well-being and functioning at work. To this end, this symposium presents six studies that focus on how employees feel, behave and adapt in times of financial turmoil, and on the factors that facilitate or impede their functioning.

The symposium opens with Nikolaou's presentation on the impact of the crisis on employment relations. Results from three studies suggest that job insecurity and psychological contract breach relate to decrements in employee well-being and organizational commitment, and increases in turnover intentions. However, perceived organizational support, as well as employee core-self evaluations and resilience, facilitate adaptation in an unstable environment. The second study by Epitropaki examines a moderated-mediated model regarding the role of perceived employability on stress, depression and meaning in life. Results show that employability mediates the relationship between self-esteem and proactive personality and outcomes. Further, results indicate a significant joint effect of self-esteem and LMX on perceived employability, as well as a significant interaction of perceived employability and proactive career behaviors on stress, depression and meaning in life.

The third study by Markovits and colleagues focuses on the impact of the economic crisis on employee burnout. Their results show that extrinsic and intrinsic facets of job satisfaction relate to burnout, and that burnout relates to affective but not continuance commitment. Interestingly, employees' personal experiences of unemployment in the family do not seem to impact further their attitudes and behaviors. The study by Papachristopoulos shows that autonomous motivation mediates the relationship between justice and vitality, but not the relationship between justice and pay satisfaction. Xanthopoulou and colleagues also focus on organizational justice and show that distributive (but not procedural) justice boosts work engagement particularly when employees are confronted with organizational changes. This moderating effect further relates positively to job performance and functioning to change via engagement. This symposium ends with a case study by Vakola and colleagues on how organizations can be successful in times of financial instability. These authors discuss how a leader's values may shape business decisions and change management practices and the related outcomes. Evangelia Demerouti will critically discuss the contribution of these studies in better understanding how employees may survive in times of financial turmoil.

### **S1: Exploring the Impact of the Crisis on Employment Relationships in Greece**

Ioannis Nikolaou

*Athens University of Economics and Business, Athens, Greece*

Greece has suffered heavily from the financial crisis since 2009. General unemployment rates have rapidly increasing surpassing 25% among the general population and above 50% for young people below the age of 25. The impact of the crisis has been huge among people and organisations in both the private and the public sector of the economy, with suicidal rates also increasing substantially. The impact of the financial crisis among Greek employees is explored through three independent studies carried out during this period, adopting a psychological contract perspective.

The first study follows a cross-sectional design (N=301) in order to explore the impact of organisational changes and job insecurity on employees' attitudes, well-being and psychological contract breach and violation. Our main findings indicated that job insecurity was the strongest predictor (compared to experiences of organizational change, psychological contract breach and violation) on psychological well-being. Also, perceived organisational support partially mediates the relationship between job insecurity and psychological well-being and between job insecurity and employee satisfaction.

The second study explores similar issues in the Greek banking sector, one of the sectors that have been through major organisational changes in Greece during the recent years, adopting a multi-level approach, with the participation of bank employees (N=205) and their supervisors (N=100). Our results showed that Supervisor's psychological contract breach and feelings of violation are positively associated with subordinates' breach/ violation. Also, employee's perceived organisation support is positively associated with supervisors' perceived organisational support and experiences of organisational change mediate the relationship between supervisors' perceived organisational support and employees' psychological contract fulfilment.

Finally, in the third study, we aimed to explore the role of employee's resilience and core-self evaluations with a sample of retail employees (N=115) from a multi-national company operating in Greece. Our results replicated most of the previous findings and also showed that core-self evaluations and resilience are negatively associated with job insecurity and that feelings of violation is the strongest predictor of turnover intentions/commitment compared to past experiences of organizational change and psychological contract breach.

Overall, these results demonstrate the high levels of psychological contract breach and violation during these years in Greece; employees feel betrayed and insecure. Results also demonstrate the strong impact of job insecurity climate but also the positive impact that Human Resources Departments can have (through Perceived Organizational Support), along with the small effect of individual characteristics (core-self evaluations and resilience).

## **S2: Perceived Employability and Employee Stress, Depression and Meaning in Life: A Moderated-Mediated Model**

Olga Epitropaki<sup>1,2</sup>

<sup>1</sup>ALBA Graduate Business School at the American College of Greece, Athens, Greece, <sup>2</sup>Aston University, Birmingham, UK

In recent years, economic recessions, technological changes and fierce global competition have dramatically changed the nature of work. Organisations are constantly being involved in restructuring, downsizing and "rightsizing" in their effort to reduce cost and improve efficiency and effectiveness. Millions of workers have been laid off, while others have been "involuntarily" demoted to part-time employment or some other form of temporary or contract work. For many employees, such conditions inevitably cause high levels of insecurity and uncertainty concerning the nature and future existence of their jobs (e.g., Jacobs & Blustein, 2008; Hartley, Jacobson, Klanermans, & van Vuuren, 1991; Sverke & Hellgren, 2002).

Research has consistently found perceptions of adverse employment environments to be related to lower well-being and higher rates of physical complaints, psychological strain and poor mental health (e.g., Ashford et al., 1989; Barling & Kelloway, 1996; Chirumbolo & Hellgren, 2003; Hellgren & Sverke, 2003; Mohr, 2000; Sverke & Hellgren, 2002). In an environment of turmoil, a key goal for individuals is to maintain and enhance their

attractiveness in the labor market. Fugate et al. (2004, p. 23) defined employability as "one's ability to identify and realise career opportunities" whereas Rothwell and Arnold (2007) have defined it as "the ability to keep the job one has or to get the job one wants". High perceptions of employability minimise the negative outcomes of employment uncertainty such as high stress, depression and increase "eudemonic" outcomes such as meaning in life.

The present study utilizes a sample of 803 working individuals in Greece and examines the role of self-perceived employability on employee stress, depression and meaning in life controlling for environmental uncertainty. Self-esteem and proactive personality are hypothesised to be important predictors of employability and employability is predicted to mediate the effects of self-esteem and proactive personality on employee stress, depression and meaning in life. I further examine a moderated mediated model using Hayes PROCESS (Model 21) to test the moderating effect of LMX in the relation between self-esteem and proactive personality on employability as well as the moderating role of proactive career behaviors in the relation between employability and outcomes. Results show that in conditions of high LMX there is a significant indirect effect of self-esteem on stress, depression and meaning in life via perceived employability. They further provide support for a joint effect of employability and proactive career behaviors on employee stress, depression and meaning in life.

### **S3: Employee Attitudes and Burnout in Times of Economic Crisis**

Yannis Markovits<sup>1</sup>, Diana Boer<sup>2</sup>, Sibylle Gerbers<sup>3</sup>, Rolf Van Dick<sup>3</sup>

<sup>1</sup>*Ministry of Finance, Thessaloniki, Greece*, <sup>2</sup>*University Koblenz-Landau, Koblenz, Germany*,

<sup>3</sup>*Goethe University, Frankfurt, Germany*

Employee attitudes and burnout have been examined thoroughly during the last three decades showing direct relationships between them. Job satisfaction has been inversely related to burnout, emotional exhaustion, and depersonalization (e.g., Penn, et al., 1988; Onyett, et al., 1997; Martin, & Schinke, 1998; Acker, 1999; Evans et al., 2006; Rosales et al., 2013). Most of the studies have been conducted in the health sector and the participants were mainly teachers, social workers and nurses (professions involving high levels of stress). Tsigilis et al. (2006) conducted a study in Greece among primary school teachers and found that job satisfaction facets which contributed to early educators' burnout varied as a function of their workplace (satisfaction with the nature of the job and working conditions negatively related to emotional exhaustion and increased satisfaction with the nature of the job and immediate supervisor associated with reduced emotional exhaustion). Regarding organisational commitment and burnout, Leiter and Maslach (1988) found that high burnout was related to reduced organisational commitment and King and Sethi (1997) found that employees with high levels of affective commitment had lower burnout and that commitment acted as a buffer against stress. Similar negative relationships were also shown in numerous studies since then, most of them focusing to the health and education sectors. Markovits et al. (2014) showed that employees working under poor conditions due to the economic crisis, compared to times before crisis were reporting lower levels in job satisfaction, and affective organisational commitment and higher levels in continuance commitment.

The present study examines the relationship between job satisfaction facets (extrinsic and intrinsic) and organisational commitment forms (affective, continuance, and normative) and burnout dimensions (emotional exhaustion and depersonalization) in a Greek sample of 459 employees working in times of severe economic crisis. Job satisfaction and its facets (extrinsic satisfaction and intrinsic satisfaction) are strongly negatively correlated to emotional exhaustion and depersonalisation. The same applies for affective commitment and the two types of burnout, and to a lesser extent to normative commitment and burnout. Continuance commitment has no significant relationship to burnout. All results are in line with previous

studies and strengthen the argument that, by and large, affective and normative forms of employee attitudes suffer from burnout experiences, or burnout harms attitudes especially in times of economic crisis. On the other hand, calculative forms of attitudes, such as continuance commitment, are not affected by emotional exhaustion and depersonalisation, since employees have already measured the effects and side-effects of their employment conditions and employment-related decisions, especially in crises, and as a result burnout expressions could be neutralised. Finally it is interesting, that personal experiences of unemployment in one's family do not worsen the participants' attitudes and burnout which means that the negative climate due to the prolonged and on-going crises suffices to reduce positive and increase negative feelings in employees - irrespective of their personal circumstances.

#### **S4: Justice, Pay Satisfaction and Affective Well-being in the Greek public Sector in Time of Crisis: The Mediating Role of Autonomous Motivation**

Konstantinos Papachristopoulos

*Hellenic Army Academy, Athens, Greece*

*"Don't get mad, get even." - Robert F. Kennedy*

The importance of the fairness of how rewards and privileges are distributed to the employees and the procedures that comes with it should be investigated for its impacts on attitudinal and behavioural intention outcomes (Colquitt et al, 2001, Konovsky, 2000, Zapata-Phelan et al., 2009). In time of crisis this seems to be more crucial since resources and rewards become limited (especially in public sector), and increased pressure to public servants may cause more distress for them. Distributive justice has been shown to be significantly and positively related to increased motivation (Cropanzano & Rupp, 2003), general job satisfaction (DeConinck, Stilwell, & Brock, 1996) and work performance (Zapata-Phelan et al., 2009) and it was among the factors found to affect the satisfaction of the three psychological needs amongst French teachers (Boudrias et al., 2011). Moreover, research has found that autonomous work motivation mediated the relation between distributive justice and turnover intentions (Bérubé, Gagné, & Donia, 2007); but no relevant research, to our knowledge, has focused on examining the role that autonomous motivation to the relation between justice and components of affective well-being (i.e. vitality) and pay satisfaction in public sector. This could be crucial for public service motivation (PSM) enhancement since it has been highlighted that autonomous motivation share some common characteristics with PSM (Gagné & Forest, 2008, Vandenberghe, 2009, Wright, 2010). This current study investigates the relationship of justice (distributive and procedural) and the outcomes of pay satisfaction and subjective vitality in Greek public sector as well as the mediating role that autonomous motivation may play to this relation. We hypothesise that justice in Greek public sector is positively correlated with subjective vitality and pay satisfaction and autonomous motivation mediates these relationships.

A random sample of Greek public servants (N=187) was employed in cooperation with National Centre for Public Administration and Local Government (EKDDA). Series of regression analyses were performed and the mediational effects were tested following the procedures outlined by Baron and Kenny.

Justice was found to be correlated with autonomous motivation and subjective vitality, whereas the hypothesis about the mediational role of autonomous motivation was partially supported since this was not valid for justice and pay satisfaction relation. According to the results the pursuit of justice could be one of the social organisational resources that public sector in Greece could focus on so as to enhance autonomous motivation and improve employee well-being. Implications for research and interventions and practices in public sector will be discussed.



## **S5: Organisational Justice Matters for Employee functioning in Changing Environments: A Study of Greek Organisations in Times of Financial Recession**

Despoina Xanthopoulou<sup>1</sup>, Panagiotis Gkorezis<sup>1</sup>, Victoria Bellou<sup>2</sup>, Eugenia Petridou<sup>1</sup>

<sup>1</sup>*Aristotle University of Thessaloniki, Thessaloniki, Greece,* <sup>2</sup>*University of Thessaly, Volos, Greece*

The global financial crisis created an unstable environment that forced many organisations to introduce unfavourable changes in order to survive. In this context, the vast majority of Greek organizations have employed severe measures to reduce costs (e.g., layoffs, salary and resource cuts, job intensification). Such organisational changes are demanding, because employees need to invest immense effort in order to adapt. As a result, work-related well-being, job performance, but also engagement suffers; because changes are not only threatening but also demotivating since their outcomes are often unclear.

Organisational justice has been recognised as an organisational-level resource that facilitates the implementation of organisational changes by preventing their negative consequences. Despite the large body of studies that support the direct effect of procedural (i.e. fairness of processes) and distributive (i.e. fairness of outcomes) justice on positive reactions to change, there is scarce evidence on the boundary conditions under which organisational justice matters most in changing environments. Also, the majority of previous studies have been conducted in changing contexts, but failed to assess the degree of these changes directly. The purpose of this study was to investigate whether organisational changes moderate the relationship between justice and work engagement. Based on justice theories and the job demands-resources model, it was expected that the positive effect of justice on engagement will be particularly prominent when needed (i.e. when employees face unfavourable changes). Also, it was hypothesised that the changes x justice interaction will relate indirectly to job (task and contextual) performance and adaptation to change via work engagement.

The study was conducted in the midst of the financial crisis in Greece. Participants were 224 employees nested in 53 organisations. Multilevel analyses revealed that organisational changes moderated the relationship between distributive (but not procedural) justice and engagement such that distributive justice related positively to engagement only for employees facing high levels of changes. This moderating effect related indirectly to all outcomes via work engagement in the hypothesised direction. Finally, procedural justice related indirectly to all outcomes via work engagement, as expected. These results suggest that, in financially unstable environments, only distributive justice helps employees deal effectively with organisational changes. When employees face organisational changes but believe that their rewards are in balance with the effort they invest at work are more likely to perceive changes as challenges. As a result, they are more engaged, and consequently they perform better and adapt to the change. These findings advance our understanding about which and how organisational-level job resources help dealing with organisational changes. Also, this study adds to past research by showing that in financially unstable environments, employees place more importance on fair rewards rather than fair processes. Finally, this study provides insights for managers, who struggle to introduce unfavourable organisational changes in times of recession.

## **S6: Managing Change through Leader's Cultural and Personal Values: The Case of Apivita**

Maria Vakola, Dimitris Bourantas, Marina Karli

*Athens University of Economics and Business, Athens, Greece*

While the need for change is evident, the successful implementation of organisational change is not easy. Many scholars agreed that one critical success factor of successful change management is effective leadership. Effective leadership can be shaped among other factors

by leader's own values and behaviors (Doney, Cannon, & Mullen, 1998). The main question we seek to answer is 'How do cultural and family values affect leader's change management and business practices?'. This case study was built on data collected from multiple sources (i.e. archival records, semi-structured interviews, and biographical-narrative interviews (Bertaux & Kohli, 1984; Fraser, 2004). Content analysis was employed for the analysis of the data.

Apivita is a Greek natural cosmetics company, counting 35 years of life employing 250 employees with a strong philosophy, values, social responsibility, heritage and an innovative outlook. Apivita has managed to find corporate success based on the abilities of the firm to adapt to the public demand for a greener way of being and by developing products that combines the natural, environmental and social element. As a result, Apivita can claim to be one of the few Greek companies to have emerged from the six-year recession not just intact, but so confident of its future.

Apivita's founder cultural and personal values are presented and the way that these values shaped his business decisions and change management practices is discussed. For example, Apivita's founder grew up in a family of beekeepers, developing a deep understanding of the nature and an appreciation of its laws and balance. Nature appreciation is present not only in products but also in company's partnerships, and is reflected in a series of business decisions. He considers his business as a living organism like the bee, never stops creating value for society, for the natural environment, and for the economy. This holistic perspective characterises the philosophy of Apivita and the values which this philosophy embodies. Finally, conclusions are presented indicating both the bright and dark side of leader's business decisions regarding organisational change based on his personal and cultural values.

### **Symposium: Wellbeing and work-life balance in the emergency and security services**

Chair: Gail Kinman

*University of Bedfordshire, Bedfordshire, UK*

There is evidence that people working in the emergency and security services experience higher levels of job-related stress, work-life conflict and burnout than many other occupational groups. Although it is crucial to develop effective interventions to improve wellbeing in such working contexts, the risks of 'one-size-fits all' approaches that fail to consider factors intrinsic to the job context and the individual have been recognised. This symposium presents five studies that utilise quantitative and qualitative methodologies and draw on different models of job stress to explore wellbeing and work-life balance outcomes in several occupational groups within the emergency and security services. All of the occupations included are 'safety critical' where responsibility for the wellbeing of members of the public is an intrinsic factor. Burnout, work-life conflict and an inability to recover from work therefore has strong potential to not only impair the wellbeing and personal life of the employees themselves, but also threaten the welfare of others.

Paper 1 explores relationships between job characteristics and wellbeing in a group that works under particularly hostile and demanding conditions, but has been little studied: humanitarian aid workers. It identifies the prevalence of burnout and tests the performance of the effort-reward imbalance model in predicting the three burnout dimensions, while controlling for socio-demographic and occupational variables (including trauma). The implications of such intensely threatening working conditions for the long-term wellbeing and personal life of aid workers are considered. Paper 2 utilises the effort-recovery model to investigate associations between working conditions (job-related demands and experiences of aggression), time-based, strain-based and behaviour-based work-life conflict and emotional exhaustion in prison officers. It is argued that behaviour-based conflict is particularly relevant in male-dominated, interdependent

jobs that require the management of 'difficult' people. Two recovery behaviours (detachment and rumination) are examined as potential resources to help people manage the work-home interface more effectively. Paper 3 investigates the main and buffering effects of job demands and work-related and personal resources on work-life outcomes in a large sample of operational staff working within several Fire and Rescue Services. It extends knowledge of the working conditions of emergency services personnel by examining the predictors of work-life enrichment, as well as work-life conflict. Also examined is the role played by detachment and two types of rumination about work: affective and problem-solving rumination. Paper 4 draws on data obtained from a series of focus groups conducted with Service personnel to investigate their work-life balance experiences and concerns. Respondents' views about the compatibility between the demands of the Armed Forces and family life are explored, and the role played by gender, rank and caring responsibilities considered. Attitudes of Service personnel towards the introduction of flexible working options and perceptions of their effectiveness in improving work-life balance are also considered. The fifth and final paper discusses the findings of semi-structured interviews with officers from a major police force that aimed to explore personal experiences of work-life conflict. It is argued that employees and employers, especially those in intrinsically stressful jobs, have a dual responsibility for managing work-life balance. The paper describes the development of a competency-based framework to identify the knowledge, skills and abilities required by police officers to 'self-manage' work-life balance.

The symposium concludes with a discussion of the advantages and drawbacks of adopting an occupationally-specific approach to identifying the factors that underpin wellbeing and successful work-life management balance in the emergency and security services. The implications of the findings for informing more effective tailored interventions to improve wellbeing in the work and personal domains are also discussed.

### **S7: Effort Reward Imbalance, Over-Commitment and Burnout amongst Humanitarian Aid Workers**

Liza Jachens, Jonathan Houdmont

*University of Nottingham, Nottingham, UK*

Humanitarian aid workers face many stressors and adverse risks to themselves due to their hostile and demanding work environment (for example: traumatic events, witnessing distress, situation unpredictability, high workload, life threatening events, tough living conditions or lack of resources) Humanitarian aid work has consequently been identified as an occupation with a high incidence of psychological distress. Prolonged exposure to challenging environments and dealing with suffering recipients can put workers at risk for emotional exhaustion. Little is known, however, about the relationship between organisational stressors and burnout among humanitarian aid workers and research on their mental health is scarce.

To gain insight into the relationship between workplace characteristics and mental health, this study's purpose is to examine the prevalence of burnout (Maslach Burnout Inventory-Human Services, MBI) that comprises three subscales: emotional exhaustion (EE), lack of personal accomplishment (PA) and depersonalisation (DP), and its association with stress-related working conditions - defined in terms of effort-reward imbalance (ERI). Survey data were obtained from 1063 women and 917 men working for an international humanitarian agency operating across four continents. Logistic regression analyses were conducted separately for males and females to investigate the relationship between effort-reward imbalance and risk of burnout dimensions, while controlling for socio-demographic and occupational variables (including trauma).

Using established cut-off points for the identification of burnout, 25 participants (1.2%) scored above the threshold criteria for all three dimensions of burnout. Nonetheless, 30.7% scored above the threshold criterion for EE, 9.3% scored above the threshold for DP, and 43% scored above the threshold for diminished PA. Several personal and job-related characteristics (i.e. younger age < 34, not married/co-habiting, internationals/expatriates, low security risk duty station) were significantly associated with higher EE and DP and lower PA. Women were significantly more at risk than men for PA and EE. Logistic regression analyses for the full model showed ERI and OC to be significant predictors for EE (OR women 12.76, 95% CI 8.11 - 20.07; men 15.82, 95% CI 8.88 - 27.92; women 10.16, 95% CI 6.84 - 15.10; men 12.08, 95% CI 7.04 - 20.75 respectively) and DP (OR women 4.12, 95% CI 2.14 - 8.15; men 3.92, 95% CI 1.91 - 7.83; women 5.48, 95% CI 2.76 - 10.93; men 5.03, 95% CI 2.34-10.80 respectively). ERI was a significant predictor for women on PA (OR women 1.44, 95% CI 1.02-2.03; men 1.41, 95% CI .96 - 2.04).

It was concluded that effort-reward imbalance is strongly associated with all burnout dimensions for both male and female humanitarian aid workers. Tailored interventions to reduce effort-reward imbalance among humanitarian aid workers will be discussed and the implications of the findings for the personal life of this occupational group will be discussed.

### **S8: Job Demands and Work-life Conflict in UK Prison Officers: The Role of Recovery Experiences**

Gail Kinman, Andrew Clements, Jacqui Hart  
*University of Bedfordshire, Bedfordshire, UK*

Although prison officers experience the working conditions associated with psychological distress and work-life conflict, few studies have directly explored this issue. Several studies have found that officers report particularly high levels of demands (such as heavy workload, fast working pace and high work intensity), as well as more job-specific stressors (such as, aggression from prisoners). The implications of these hazards for the wellbeing and work-life balance of prison officers and the individual recovery behaviours that might moderate this relationship have not been examined. This study investigates relationships between working conditions (i.e. job-related demands and experiences of aggression) and three facets of work-life conflict (time-based, strain-based and behaviour-based) in a sample of 1,682 officers working in prisons in the UK (85% male). Compared to time-based and strain-based work-life conflict, behaviour-based conflict has been little researched as it is typically considered irrelevant to most occupations. Nonetheless, it is argued that this type of conflict is more common in male dominated, inter-dependent jobs where employees are required to manage people who may be uncooperative, hostile or aggressive. Its potential relevance to prison officers' working conditions is therefore clear.

This study also examines relationships between working conditions, work-life conflict and emotional exhaustion. In line with the effort-recovery model, it examines associations between work-life balance, recovery experiences (affective rumination and detachment) and strain. It is argued that time-based work-life conflict will constrain opportunities for respite and recovery, but strain-based conflict may encourage excessive rumination about work and further impair recovery processes - thus enhancing the potential for emotional exhaustion. The potential moderating role played by recovery experiences in the relationship between working conditions and emotional exhaustion is also explored. It is predicted that ruminating about work concerns has the potential to exacerbate the negative impact of job-related demands and experiences of aggression on emotional exhaustion, whereas the ability to detach (i.e. maintain firm boundaries between work and personal life) will attenuate such effects.

High levels of all three types of work-life conflict were observed, but time-based conflict was the most strongly endorsed overall. All work-life conflict dimensions were significantly related to working conditions (job demands and experiences of aggression) and emotional exhaustion. Evidence was found for the damaging effects of higher affective rumination and lower detachment in that they enhanced the positive association between job demands and experiences of aggression and the outcome of emotional exhaustion. The models explained between 44% and 54% of the variance in emotional exhaustion. The implications of the findings for the sustainable wellbeing and job performance of prison officers will be discussed.

### **S9: Job Demands and Resources, Recovery Strategies and Work-life Outcomes in UK Fire and Rescue Service Operational Staff**

Nicola Payne<sup>1</sup>, Gail Kinman<sup>2</sup>, Emma Hughes<sup>1</sup>

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There is evidence that fire and rescue service (FRS) operational staff experience stress and work-life conflict due to factors such as long work hours, rotating shifts, and traumatic incidents. As yet, however, few studies have systematically explored the interface between work and personal life in this sector. Most research conducted on work-life issues in general draws upon a role-conflict paradigm, but there is growing evidence that occupying different roles can be enriching with positive outcomes for employees. Nonetheless, little focus has yet been placed on enrichment and conflict simultaneously, especially within the emergency services.

The job demands-resources (JD-R) model has been used to examine the impact of working conditions such as job demands, role clarity, social support and job control on work-life conflict. This model stipulates that job resources have direct effects on strains and may also buffer the effects of job demands on such outcomes. More recently, personal resources, as well as features of the working environment, have been included in the JD-R model. Recovery strategies (i.e. such as avoiding affective rumination about work and the ability to detach from it, may be potential buffers of the relationship between demands and work-life outcomes. Problem-solving rumination, a more constructive form of rumination, is an additional strategy but its moderating role has rarely been investigated.

This study investigates the main and buffering effects of job demands (i.e. workload demands, relationship difficulties and change management issues) and job resources (coworker and manager support, role clarity and job control) on work-life conflict (WLC) and enrichment (WLE). It also examines the role of recovery strategies (detachment and affective and problem-solving rumination). A sample of 800 operational staff working in several FRS within the UK completed a range of measures including the Health and Safety Executive (HSE) Management Standards Indicator.

WLC was predicted by: increased job demands and organisational change management issues; reduced job control; increased rumination and problem-solving rumination and reduced detachment. Both affective rumination and problem-solving rumination moderated the negative effects of job demands on WLC. WLE was predicted by: reduced job demands, relationship difficulties and organisational change management issues; increased manager support and role clarity; reduced rumination and increased detachment and problem-solving rumination. Only problem-solving rumination moderated the negative impact of job demands on WLE.

The findings highlight the importance of personal recovery resources in helping FRS operational staff attenuate the negative impact of job demands on the work-home interface. They have the potential to inform organisationally-focused changes to help FRS manage work-related hazards, as well as for helping them identify more positive ways to unwind outside of work to reduce work-life conflict and enhance the potential for enrichment between work and personal life.

## **S10: Working Conditions and Work-life Balance within the Armed Forces: the Importance of Gender and Rank**

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This study was funded by the UK Ministry of Defence to explore experiences of work-life balance (WLB) and attitudes towards the implementation of flexible working within the Armed Forces. Fourteen focus groups involving 116 male and female Service personnel were conducted in various locations in the UK (four each with Royal Navy, Army, and Royal Air Force personnel and two with Royal Marines). Focus groups were divided by gender and by rank. The qualitative data were analysed using thematic analysis.

In general, Service personnel felt that they did not always have a good WLB; in three-quarters of the focus groups, some Service personnel indicated that they had put their notice in to leave the Armed Forces. Many women who were leaving were doing so as they could not balance the demands of the Services with the demands of a family, and were willing to forego their careers rather than remain. Flexible working options, such as part-time working that is common among female civilian workers, were widely considered unsustainable in the Armed Forces. Most participants seemed to accept the inevitability of a poor WLB, rather than challenging the status quo. Indeed there was a high level of commitment and loyalty to the Services, most especially among the higher ranks.

The main reasons for a lack of WLB were the military lifestyle (regular postings, relocations and deployments), current Manning levels and a lack of resources (both financial and people-related). Barriers to obtaining a good WLB were not only the military lifestyle but also the organisational culture that exists (not being task-focused, overly concerned with presenteeism, working long hours to gain promotion). The inability to plan ahead and need to cancel plans were also key frustrations for many.

The findings highlighted some flexibility in the working environment for Service personnel (such as starting late on Mondays and finishing early on Fridays), but this was generally on an informal basis and dependent upon occupational role, service type and manager support. Most participants were unaware of any formal flexible working provision, such as the New Employment Model that was being implemented in 2015.

A considerable majority of respondents wished for the Armed Forces to be more flexible. On the other hand, there appeared to be limited appetite for formalising flexibility. This could be partially attributed to practical concerns raised by many (particularly those in more senior roles). There seemed to be an underlying fear that formalising a flexible working policy would create more demand, which was typically considered not to be manageable. Those from lower ranks also felt that there was a lack of trust among senior personnel which would hamper any formal implementation. Attitudes towards flexibility were also dependent on individual factors (e.g., age and gender and whether or not they had dependent children).

## **S11: Work-life Balance Challenges in the Police**

Almuth McDowall

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Police forces and law enforcement agencies around the globe have recently undergone profound and fundamental changes. The UK police have experienced major budgetary cuts which have resulted in major reductions in the number of officers and support staff together



with economies of scale. Neither operational nor organisational demands have diminished, and may indeed increase in the future as the tasks undertaken by the police are expanding, the nature of crime is changing and public expectations for the management of crime are escalating.

This paper explores the pertinent issues for work-life balance in policing. It uses the UK as a contextual example, but also draws on research from other contexts where applicable. The occupational factors that have potential to threaten the work-life balance and wellbeing of police officers will be considered, together with the impact of a recent escalation in organisational and operational demands related to mandated cuts and job losses. Organisations are required by law to protect their employees' wellbeing, but employees also have a responsibility for managing their work-life balance. It is therefore vital to identify the behaviours that are helpful in this context. The paper describes the development of a competency-based framework to identify the knowledge, skills and abilities required by police officers to 'self-manage' their work-life balance.

Participants from a major police force in the UK, which is committed to improvements to service and human resource initiatives, provided critical incidents that described their work-life balance experiences and behaviours. Semi-structured interviews were utilised. The resulting behaviours were subsequently refined into 12 behavioural categories using card-sort techniques that were subsequently validated using an online survey. The findings indicated that eight competencies, including boundary management, managing flexibility and managing expectations, provided the most robust framework for the behaviours. The findings have informed a range of practical activities, including workshops and self-reflective tasks, designed to help police officers manage their work-life balance more effectively. The presentation will conclude with a discussion of further activities and support mechanisms that may be congruent with the context and culture of policing in order to protect the welfare of officers and ensure public protection effectively and sustainably.

### **Symposium: Boundary Management and Smart Technology in Boundaryless Working Environments**

Chair: Wido Oerlemans

*Eindhoven University of Technology, Eindhoven, The Netherlands,*

Nowadays the work environment of many employees is characterized by blurring boundaries between different life domains. Flexible work arrangements and smart technology include opportunities but also challenges for employees' health. The current symposium brings together six studies from three different European countries examining predictors, outcomes and moderating factors of workplace characteristics and individual behaviours in the context of managing boundaries between work and private life.

The study of Palm, Seubert and Glaser examines boundary management behaviour from the perspective of the Theory of Planned Behaviour. Segmentation preference and organizational segmentation norms turned out as predictors of actual boundary management behaviours which in turn are positively associated with mental health. Boundary control (e.g., over working time and pace) showed to be a moderator in the relationship between segmentation preference and boundary management behaviour.

The longitudinal study of Glaser, Palm and Seubert analysed the effect of different types of boundary management profiles for employees' health. Employees' boundary management profiles can be distinguished along the dimensions of domain centrality (subjective importance of respective work or private domains), boundary control (high vs. low) and the actual degree of cross-role interruption behaviors (e.g. taking work home). In sum, they found that employees with self-determined boundary management profiles are healthier.

Paskvan and Kubicek investigate in their longitudinal study both work characteristics and individual characteristics as predictors for the use of flexible work time arrangements as well as outcomes of flexible work time arrangements (performance and detachment from work). Their results stress the importance of supervisory and organizational trust for actually using available flexible work time arrangements. However, their study also points to the potential detrimental role of using such arrangements for performance.

Moving on to individual behaviours, Oerlemans et al. examined daily work-related smartphone use and its effect on daily recovery (psychological detachment from work and relaxation) and well-being. They confirm that the hypothesized negative effect of daily work-related smartphone use on recovery outcomes was only found for employees who are either highly addicted, highly a-motivated, or low in self-concordance with respect to using a smartphone. The study of Binnewies, Brosch and Gröning examined the effects of psychological detachment and media use during vacation on well-being during vacation time. Study results showed that psychological detachment during vacation predicted an increase in well-being over vacation time. Moreover, employees who showed a higher use of emails, mobile phone and messaging services were less detached from work during their vacation.

Finally, Balk et al. is in the process of examining the role of pleasure and effort during leisure time activities on objective recovery outcomes using activity trackers (sleep duration, number of awakenings per night, resting heart rate during wake-up) in addition to subjective ratings among a special group of elite athletes who are preparing for the Olympics. Results will be revealed at the conference. Taken together the six studies extend our knowledge on the interplay between workplace characteristics, individual behaviours and technology that affect different forms of boundary management and recovery experiences, and their effects for employees' well-being."

## **S12: Individual and Organizational Antecedents of Boundary Management Behavior - from the Perspective of Theory of Planned Behaviour**

Esther Palm, Christian Seubert, Jürgen Glaser  
*University of Innsbruck, Innsbruck, Austria*

The distribution of information and communication technologies in the working environment enables work to be done almost anywhere and anytime. This increasingly leads to a blurring of work and nonwork domains, as work may easily intrude the nonwork domain (e.g., via smartphone, laptop). Beneficial effects (e.g., work family enrichment) but also detrimental effects (e.g., lack of recovery) have been found in several studies. While studies analysing potential effects of domain blurring for life domain balance/conflicts and lack of recovery are rapidly increasing, less attention has been directed towards potential antecedents of individual boundary management behavior (taking work into the nonwork context). Based on the theory of planned behavior (Fishbein & Ajzen, 1975), the interplay of attitudes towards boundary management (here: segmentation preferences), subjective norms concerning boundary management (here: segmentation norms) and perceived behavioral control (here: boundary control) will be analysed in the context of actual boundary management behavior. These organisational and individual antecedents of boundary management behavior will be examined in relation to work-related irritation as a potential predictor of reduced psychomental health.

Data of 298 white- and blue-collar workers in small and medium sized enterprises of diverse industries were analysed through moderated mediation analysis, controlling for demographic factors (gender, age) and working hours. All measures were drawn from established multi-item survey scales. Psychometric properties (internal consistency, factor structures) of the adapted



measures were fairly good. Results show a full mediation of the relationship between segmentation preference and irritation through actual boundary management behavior and a partial mediation of the relationship between segmentation norm and irritation through boundary management behavior. Segmentation preference and segmentation norm are both independently related to boundary management behavior. Boundary control moderates the relationship between segmentation preference and boundary management behavior, but not the relationship between segmentation norm and boundary management behavior.

This study strengthens theory by integrating boundary management concepts and theory of planned behavior. Results shed light on individual as well as organisational antecedents of individual boundary management behavior. Beside personal preferences, both organisational context in terms of subjective organisational norms as well as boundary control as moderating influence play a crucial role in the extent of individual boundary management behaviour. Further organisational antecedents of boundary management and their interaction with individual factors (person-environment-fit) need to be examined in order to overcome the unduly individualistic view of boundary management research. Constraints of cross-sectional self-report studies apply so far. Follow-up data collection at T2 will be concluded during fall 2015 and results of longitudinal data analysis will be presented.

### **S13: 'Work Warrior' or 'Fusion Lover'? - Boundary Management Profiles and Psychomental Health**

Bettina Lampert, Esther Palm, Christian Seubert, Jürgen Glaser  
*University of Innsbruck, Innsbruck, Austria*

This longitudinal study provides first evidence concerning the prevalence of theoretically-driven profiles of boundary management and prospective associations with health-impairment of employees. Boundary Management defines strategies along a dimension of integration vs. segmentation between work and private domains (Allen, Cho & Meier, 2014). Boundary management profiles have been classified with respect to three theoretical dimensions subsuming domain centralities (subjective importance of respective work or private domains), boundary control (perceived influence on individual boundary management) and cross-role interruption behavior (actual behavioral spillover between life domains; Kossek & Lautsch, 2008; Kossek et al., 2012). Profiles have been labeled by Kossek and colleagues for example as “work warriors” (characterized by high work-private spillover, high work centrality, low boundary control) or “fusion lovers” (high work-private spillover, high work and family centrality, high boundary control). This study aims to assess the prevalence and stability of boundary management profiles and their prospective relations to psychomental health of employees.

1215 employees in different occupational fields (T1) were examined with regard to their work-private spillover (boundary-expanding work behavior) and boundary control by established self-report measures. 941 employees participated in the longitudinal study (T1+T2; time lag: one month). Psychomental health was assessed by approved positive (work ability, motivation, engagement, relaxation) as well as negative health indicators (irritation, emotional exhaustion, role conflicts, presenteeism). Boundary management profiles were derived theory-driven (logical combination of high/low levels) vs. empirically (median-splitting, k-means clustering). Analysis of (co-)variance was applied to examine health-related differences (T2) between boundary management profiles.

According to theory-driven boundary management profiles 46.9% of the participants (N= 941) were labeled “self-determined separators” (low work-private spillover, high boundary control) followed by 29.2% “volleyers” (changing profiles between T1 and T2) whereas “reactive separators” (12.1%), “self-determined integrators” (7.9%) and „reactive integrators” (3.9%)

could be retrieved with rather low rates of prevalence. Empirically-derived profiles significantly differ with regard to meaning and prevalence. Psychomental health of "reactive integrators" was worst, whereas "self-determined separators" reported the best health status of boundary management profiles. In contrast, "self-determined integrators" revealed the highest levels of motivation and engagement.

The results indicate a better psychomental health status of employees with self-determined boundary management profiles. As an implication, employers should provide high boundary control (e.g., over working time and place) to support life domain balance and prevent health impairment of employees. Limitations are due to an exclusion of domain centrality and private-work-spillover as other important aspects of boundary management. Self-reported data and potential method biases have to be taken into account. The longitudinal design enabled to identify "volleyers", i.e., employees with changing boundary management profiles; however, the short time lag has to be remembered. Methodological aspects concerning "profile-building" as well as implications for further research and practice will be discussed.

#### **S14: Still not Working from Home? Personal, Organisational and Social Aspects Undermining the Use of Flexible Work Arrangements**

Matea Paškvan, Bettina Kubicek

*University of Vienna, Vienna, Austria*

In more than half of the European states employees have the possibility to work flexibly in terms of time (Eurofound; 2010) and more than 43 million US employees use telework (Bosua et al., 2013). This makes flexible work arrangements (FWAs) an integral part of today's work. Although the availability of FWAs increases, they continue to be underused (Thompson et al., 1999). This is surprising given the proposed benefits of FWAs such as higher work-life balance. Hence, it is a key question why employees do not make use of available FWAs. Cross-sectional research showed that family supportive systems as well as individual segmentation preferences are related to the use of FWAs (Batt & Valcour, 2003; Shockley & Allen, 2009). The importance of this findings notwithstanding, these studies focused solely on family issues as determinants of FWAs use. Moreover, these studies neglected the interplay of availability and use of FWAs, moderating effects of personal, social, and organisational characteristics as well as the causality of effects.

This study aims to close these research gaps by focusing on longitudinal moderating effects of diverse characteristics on the interplay of availability and use of spatial flexibility. In addition, it contributes to the research on the outcomes of different forms of FWA (De Menezes & Kelliher, 2011) by analysing longitudinal effects of the use and availability of spatial flexibility on performance and detachment. A 2-wave longitudinal study with 343 German service sector employees was conducted. Personal, social, and organisational characteristics were measured using individual boundary management strategies (Kossek et al., 1999), trust of the direct supervisor (Mayer & Davis, 1999), and the organisational trust climate (Huff & Kelly, 2003). Availability and use of spatial flexibility (Shockley et al., 2010), performance (Williams & Anderson, 1991) and detachment (Mohr et al., 2005) were measured with validated scales.

Findings indicate that under a high availability of FWAs low boundary control increases the use of spatial flexibility. Besides individual characteristics, trust of the direct supervisor and a high organisational trust climate also increased the use of spatial flexibility. After controlling for the T1 values, the use of spatial flexibility had a direct and negative effect on performance, whereas the availability of spatial flexibility had no effect. In contrast, the use and the availability of spatial flexibility had no significant effect on detachment.

Our results indicate that individual, social, and organisational characteristics are essential when it comes to the use of available FWAs. In contrast to existing research, the use and availability of FWAs did not contribute to detachment. It may be that FWAs themselves do not decrease detachment but the circumstances going along with FWAs such as prolonged working hours. Moreover, it seems that employees will use available FWAs only if they feel that they are trusted by their supervisors and if the organisation is characterised by a trust climate. Hence, if organisations want that employees make use of available FWAs, they need to cultivate a trust climate that is also shared by supervisors and provide employees with boundary control.

### **S15: Work-related Smartphone Use and Daily Recovery from Work: The Role of Motivation and Smartphone Addiction**

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Only two decades after their introduction, smartphones are an integral part of our daily working lives. Recent research suggests that daily work-related smartphone use has detrimental effects on daily recovery and wellbeing after work. Based on self-determination theory, we examined the role of motivation to use smartphone technology and smartphone addiction in the daily recovery process. In particular, we hypothesised that both a-motivation and self-concordant motivation to use smartphone technology would buffer the negative relationship between daily work-related smartphone use and recovery experiences after work (i.e. psychological detachment and relaxation). Moreover, we hypothesised that work-related smartphone would be negatively associated to recovery experiences after work, but only for individuals who score high (vs. low) on smartphone addiction. Finally, based on the effort-recovery model, we hypothesised that recovery experiences after work would be positively associated with wellbeing at bedtime (i.e. high vigor, low exhaustion).

In total, sixty-five employees from various companies filled out a baseline questionnaire and participated in a daily diary study on five consecutive workdays (N = 322). The motivation at work scale (Gagné et al., 2010) was revised to measure motivation regarding smartphone use. Daily measures included daily smartphone use (in minutes), daily smartphone addiction (Derks & Bakker, 2014) and psychological detachment and relaxation after work (Sonnentag & Fritz, 2007). Daily indicators for wellbeing at bedtime included vigor (Schaufeli et al., 2006) and exhaustion (Schaufeli et al. 1996), which were adapted to the daily level. All measures showed good reliabilities ( $\alpha > .70$ ).

Preliminary results using multilevel analyses show that, as hypothesized, daily work-related smartphone use is negatively related to daily psychological detachment after work, but only for individuals who are high (vs. low) in a-motivation, high (vs. low) in smartphone addiction, and low (vs. high) in self-concordance. In addition, work-related smartphone use was negatively related to relaxation after work, but only for individuals who are high (vs. low) in smartphone addiction. In turn, daily recovery experiences related positively to daily wellbeing (high vigor, low exhaustion) at bedtime. These results indicate that motivation and addiction behind an individuals' actual work-related smartphone use matter for their well-being.

### **S16: Switching Off?! A Longitudinal Study on the Role of Communication Media Use for Recovery During Vacations**

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In the present study, we investigated recovery during vacation. Drawing on theories from research on recovery and boundary management, we hypothesize that psychological

detachment from work is related to a decline in emotional exhaustion during the vacation period. Furthermore, we propose that the use of communication media (e.g., email, phone calls, Facebook) will decrease the level of psychological detachment from work during vacations. Additionally, we investigate the moderating role of communication partners (work-related vs. private).

We conducted a longitudinal study with four measurement occasions: a general survey filled in upon study registration, a pre-vacation survey filled in a few days before vacation, a vacation survey filled in before vacation ended and a post-vacation survey filled in when returning to work. In total, 135 persons from different organizations who had at least one working week vacation participated in our study. Emotional exhaustion was measured in the pre- and post-vacation survey with eight items from the Oldenbourg Burnout Inventory (Demerouti et al., 2001;  $\alpha_2 = .89$ ,  $\alpha_4 = .86$ ). Psychological detachment from work was assessed in the vacation survey with four items from the Recovery Experience Questionnaire (Sonnentag & Fritz, 2007;  $\alpha_3 = .88$ ). Communication media use was measured by assessing the frequency of usage per media (email, phone calls, SMS, other messaging services, facebook) differentiating between active (= actively communicating with someone) and passive (= passively receiving messages) communication. In addition, we assessed with whom participants (e.g., family, friends, colleagues, customers) used each of the different communication media.

Repeated measurements ANOVA showed that taking a vacation was related with a decline in emotional exhaustion over the vacation period ( $\eta^2 = 0.30$ ). Results from hierarchical regression analyses controlling for gender and vacation length showed that psychological detachment during vacation predicted a decline in emotional exhaustion. Our assessment of communication media use resulted into a 3-factor structure: extended smartphone use (emails, phone calls, messaging services), Facebook use and SMS use. We found that the extended smartphone use but not facebook and SMS negatively predicted psychological detachment during vacation. Surprisingly, communication partner (work-related vs. private) did not moderate the relationship between communication media use and psychological detachment from work.

Our results show the important role of psychological detachment during vacations for recovery during this period. Moreover, our results stress the importance of limiting the use of communication media use to benefit most from vacations.

### **S17: Recovery in Elite Sport: The Role of Pleasure and Effort during Leisure Time Activities on Subjective and Objective Recovery Outcomes**

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To cope successfully with demands from work, recovery from work is regarded as a crucial mechanism in the work-stress-health chain (Geurts, 2014). An area in which a healthy balance between stress and recovery is particularly important as well is sport (Kellmann, 2002). Similar to employees, athletes need to recover from the physical and psychological demands placed on them during both training and competition. Considering that elite athletes typically spend 4-6 hours on training each day, a significant number of hours is spent outside the immediate sport setting (i.e., 'off-job'). The role of leisure time recovery is thus particularly important in sport. However, research focusing on leisure time recovery processes among athletes is limited. Moreover, most studies on 'off-job' recovery use subjective ratings and do not include objective recovery-related outcomes.

To overcome this problem, the present study used smart technology (i.e., a Fitbit Charge HR activity tracker) to measure objective recovery-related indicators such as sleep quality, restlessness, and resting heart rate. Based on the Demand-Induced Strain Compensation Recovery (DISC-R) Model (de Jonge et al., 2012) we aim to explore which activities predict physical, cognitive and emotional detachment and subsequently, how this relates to subjective (well-being) and objective indicators of recovery (e.g., sleep duration and number of awakenings per night). We hypothesised that pleasure during off-job activities after training/competition relates positively to emotional forms of recovery at the end of the day; cognitive detachment relates positively to cognitive recovery outcomes at the end of the day; and physical forms of recovery relate positively to physical recovery indicators (e.g., resting heart rate).

Elite athletes are currently participating in this study. Using a short version of a day reconstruction method, around 50 elite athletes from 6 teams will reconstruct their 3 to 5 most important leisure time activities, indicating their experienced pleasure and effort per activity, their daily recovery (physical, cognitive, and emotional) and sleep satisfaction over a one-week period. In addition, we collect objective measurements of sleep (duration and restlessness) and physical indicators of recovery (resting heart rate) using activity trackers. As we are in the process of collecting the data, results, conclusions and implications will be discussed at the conference.

### **Symposium: From work intensification to well-being: Disentangling the paths for recovery**

Chair: Marjaana Sianoja

Discussant: Pedro Torrente

*University of Tampere, Tampere, Finland*

Work has drastically changed during the last decades due to an increase in job demands, job insecurity, and blurring boundaries between work and private life. Recovery from work has been identified as a mechanism that can help sustaining health, well-being and performance even when facing high demands. The aim of this symposium is to bring together five studies on work intensification, job demands and recovery, using different methodological approaches. The studies presented incorporate different up to date research designs (e.g. diary and intervention designs) and base on both psychological and physiological indicators of recovery. Thus, they shed new light on the recovery processes and outcomes.

The first study in our symposium addresses the question of work intensification. This study captures the current trends of work intensification using a recently developed instrument for measuring intensification of work demands. The second study focuses on enrichment processes between work domain and private life using diary data. The role of work-life enrichment was examined as a mediator between daily stressors and resources at work and well-being in the evening. The third study takes a close look at the relationship between physical exercise and recovery. The authors explored, whether this association is mediated by detachment and competence, and whether the beneficial effect of exercise persists over time. Finally, two studies report results from the same intervention. In this intervention, employees either walked in a park or completed a relaxation exercise for 15 minutes during the lunch break for a period of two weeks. The first presentation shows results comparing psychological and physiological recovery outcomes in the park walk, relaxation, and control groups, and the second presentation shows results from a person-oriented view, that is, asking who benefits most from the intervention.

## **S18: Work Intensification in Service Work: Results From a Longitudinal Study**

Christian Korunka

*University of Vienna, Vienna, Austria*

The world of work has considerably changed over the last decades. Many employees experience an intensified pressure at their work places leading to increases in strain and other health related symptoms. Public media support such personal impressions by publishing numerous popular reports on increases in burnout, overwork and other themes related to the perceptions of an intensification of work. Empirical data support at least to a certain degree these experiences of many workers. In their studies on work intensification, Francis Green and his colleagues (e.g., Green & MacIntosh, 2001; Green, 2004) observed patterns of work intensification in Europe already for the first half of the 1990s. For instance, the percentage of employees who strongly agreed that to the item "My job requires me to work very hard" increased from about 30% in 1992 to nearly 40% at the end of the 20th century. Besides the seminal work of Francis Green on work intensification in the 1990s the research dealing with this important subject is quite spotty and heterogeneous. A diverse pattern of empirical data add to quite a mixed picture of the development of work intensification in the last decade. Different definitions of work intensification and measurement issues further add to an inconsistent picture.

The goal of the current study is to capture current trends in work intensification by using the recently developed "Intensification of Job Demands (IDS)" instrument (Kubicek et al, 2014). The IDS subscale "work intensification" consists of five items measuring perceptions of the need to work at increasing speed, perform different tasks simultaneously, or reduce idle time. Data were collected in nine service organizations in the sectors health, public services and IT services at two points in time with 18 months interval. 2055 employees participated at both measurement points.

In general, there was a significant trend towards an increase in work intensification in service work observable. In five organizations, internal change processes in the organizations affected the degree of the increase. Two organizations offered employee measures to cope with increased workload. In these organizations there was even a decrease in work intensification observable. Certain "employee risk groups" were also found: Lower educated women and higher educated men showed stronger increases in work intensification over time. Work intensification was found to be an additional job demand in explaining increases in burnout (Korunka et al., 2015).

In line with new secondary data our longitudinal data confirmed a further wave of increase in work intensification over the last years. Interventions focusing on the quality of working life of employees help to prevent negative effects of a further increase in work intensification.

## **S19: Happy Work = Happy Life? The Role of Stressors and Resources for Work-Life Enrichment and Well-Being**

Eva Brosch, Carmen Binnewies

*University of Münster, Münster, Germany*

Many studies focus on conflicts between work domain and home domain. With this project we wanted to address positive processes, or better enrichment processes between work domain and private life. This diary study focuses on daily stressors as well as resources at work as predictors of well-being in the evening. We assumed that work-life enrichment mediates the relation of stressors and resources at work on the one hand and well-being in the evening on the other hand. We hypothesize that role hassles and time pressures as daily work stressors and team climate and autonomy as daily resources predict positive and negative affect as well



as emotional exhaustion. Further, we hypothesize that these relations are mediated by work-life enrichment. Our five-day diary study was conducted via electronic devices with 88 employees working in municipal administrations (N = 369 daily measurements). As predictor variables we assessed role hassles and time pressure as stressors and autonomy and team climate as resources at work. These measures were gathered in a questionnaire directly after leaving the work place. Within the survey in the evening, before going to bed, we assessed the well-being measures of positive and negative affect as well as emotional exhaustion and work-life enrichment.

Results of hierarchical linear modeling (HLM) showed that role hassles and team climate predicted work-life enrichment. Role hassles predicted emotional exhaustion as well as negative affect in the evening. Time pressure predicted emotional exhaustion in the evening. Team climate predicted less emotional exhaustion and positive affect. Autonomy predicted none of the well-being variables. We could partly confirm our mediator hypotheses. Our results show the important role of work-life enrichment in the recovery process. Processes at work can enrich our private life and thus well-being after work, which is a basis for long-term health. The present study is one of the first diary studies on predictors of work-life enrichment and its role in the recovery process.

## **S20: Exercise as an Activity Contributing to Recovery: Does Exercise Intensity Matter?**

Madelon van Hooff, Sabine Geurts

*Radboud University, Nijmegen, The Netherlands*

It is widely acknowledged that exercising during off-job time facilitates recovery from work-related load effects. However, it has so far remained unclear which exercise intensity (mild, moderate, strenuous) yields the most beneficial effects on recovery, and how long these beneficial effects persist over time. The purpose of the present study, therefore, was to increase our understanding of the role of exercise in the recovery process, by examining (1) if exercise intensity is positively related to employee recovery, (2) if this association is mediated by higher levels of detachment and competence associated with more strenuous exercise, and (3) if the beneficial effects of exercise persist over time. We will answer these questions by examining associations with employees' recovery state not only at the end of the evening but also during the next morning. Data were collected by means of a daily diary study comprising two consecutive work weeks (3 measurements daily: after waking up in the morning, at the end of the workday, and at the end of the evening) among 80 participants from various occupations and organizations, who all worked at least 24 hours per week during office hours, and who typically engaged in exercise during two evenings after work. Exercise intensity was measured by asking participants each day to indicate the time they spent on mild, moderate, and strenuous exercise during their free evenings. Vigor (evening and next morning), serenity (evening and next morning), and work motivation (next morning) were included as indicators of recovery.

Multilevel analyses showed that time spent on all three types of exercise was equally strongly and positively related to competence, and that competence mediated the associations between exercise and employees' higher levels of vigor in the evening and during the next morning. However, only time spent on strenuous exercise turned out to be positively associated with detachment. Detachment mediated the relations between this type of exercise and higher levels of vigor and serenity at the end of the evening and in the morning, and higher levels of work motivation in the morning. Altogether, these results show that the positive effects of exercise on recovery are not limited to the evening after work, but persist until - at least - the next morning. Furthermore, they indicate that although even exercising at low intensity is beneficial for recovery, most beneficial effects can be obtained by engaging in strenuous exercise.

## **S21: Benefits of a Lunchtime Park Walk or Relaxation Intervention From a Person-Oriented Approach**

Marijaana Sianoja<sup>1</sup>, Ulla Kinnunen<sup>1</sup>, Anne Mäkikangas<sup>2</sup>

<sup>1</sup>*University of Tampere, Tampere, Finland,* <sup>2</sup>*University of Jyväskylä, Jyväskylä, Finland*

Within-working day recovery has previously received much less research attention than off-job recovery, and knowledge of how to most benefit from within-working day breaks in terms of recovery is limited. In this project, we conducted an intervention study aiming to promote recovery during lunch breaks. More specifically, we examined whether lunch breaks including a relaxation or a park walk exercise would have more favorable well-being outcomes than usually spent lunch breaks. We approached recovery by combining the theoretical frameworks of work and environmental psychology.

The specific aim of this study was to use person-oriented approach in order to group people based on how much they benefit from the intervention in terms of recovery outcomes. The participants came from several organizations with different backgrounds and therefore, it is likely that the target population is rather heterogeneous and, consequently, may react to the intervention differently. Person-oriented analytical methods take this heterogeneity into account (e.g., Wang, Sinclair, Zhou, & Sears, 2013). More specifically, we classified individuals through latent profile analysis (LPA) into unobserved (not pre-known) subpopulations, which enables us to analyze to whom the intervention is beneficial and in what way.

The intervention took place in spring and autumn 2014 in a sample of 153 knowledge workers from eight different organizations. We randomized the participants into three groups at the department level. The participants spent 15 minutes of their lunch break walking in the park (park-walk group), doing a relaxation exercise (relaxation group), or continued spending the lunch break as before (control group) for a total of two weeks. Before, during and after the intervention, SMS, paper-pencil questionnaires and physiological (blood pressure, cortisol awakening response) measures were used to measure well-being four times a day.

The preliminary LPA results based on the intervention data from the two experimental groups (n = 97) suggest that there exists subpopulations who seem to benefit from the intervention differently. For example, the LPA analysis based on experiences of fatigue in the afternoon revealed three latent classes: decreasing fatigue, slightly decreasing low fatigue, and stable moderate fatigue. There were more participants from the relaxation group in the decreasing fatigue class than expected and more participants from the walking group in the slightly decreasing low fatigue class than expected. Thus, in terms of afternoon fatigue participants in the relaxation group seemed to benefit more from the intervention than those in the walking group.

## **S22: Effects of Park Walks and Relaxation Exercises During Lunch Breaks on Recovery from Work Stress: A Randomized Controlled Trial**

Pedro Torrente, Jessica de Bloom, Marijaana Sianoja, Ulla Kinnunen, Kalevi Korpela

*University of Tampere, Tampere, Finland*

Natural environments promote psychological distance from one's usual context and have been linked to lower levels of negative emotions and higher levels of positive mood. Furthermore, relaxation is one of the most frequently studied and applied stress reduction methods. Relaxation techniques are designed to reduce adverse stress reactions by generating a bodily state that is the physiological opposite of stress. We combined theoretical frameworks and approaches from work and environmental psychology to design and evaluate the effects of two different lunch break interventions on employees' recovery from job stress: park walks and relaxation exercises. We examined if employees engaging in park walking or relaxation



exercises during lunch breaks report more beneficial recovery experiences and higher levels of occupational well-being during and right after the intervention period than before. We also compared their reports to those of a control group who spent their lunch breaks as usual.

We conducted a randomized controlled trial (RCT) in 153 knowledge-workers from eight Finnish companies who engaged 15-minutes daily in different lunch break activities for 10 consecutive working days. Participants were randomly assigned to three groups: (1) park walk, (2) relaxation exercise, and (3) control. For practical reasons, the study was divided in two parts taking place in spring and fall. The participants assessed their recovery experiences and occupational well-being several times per day before, during and after the intervention via SMS and paper-pencil questionnaires. In addition, they took saliva samples and measured their blood pressure on these days.

In the spring RCT, park walking and relaxation exercises had similar, but rather inconsistent effects on recovery experiences and occupational well-being. Recovery experiences hardly changed for the experimental groups and well-being improved only weakly and briefly (mainly right after the lunch break). In addition, unexpected positive changes occurred in the control group. In the fall RCT, both relaxation exercises and park walking during lunch breaks were associated with improvements in recovery experiences and well-being, especially after the lunch break. Most consistent positive findings were related to park walking. Park walking was associated with small to medium improvements in well-being across the whole working day while effects of relaxation seemed to last for a shorter time. Recovery experiences and well-being of the control group remained relatively stable in the fall RCT. The results of the physiological measurements are at present in preparation.

## **Symposium: Job insecurity - Part 1: Antecedents and Consequences of Job Insecurity**

Chair: Hans De Witte

The negative consequences of job insecurity have been studied extensively during the last decades. Research suggests job insecurity to be one of the most important work stressors, and its importance is further emphasized by the increase of the economic crisis since 2008. This symposium is a succession of a series of symposia at previous EAOHP conferences, as it presents some recent findings on job insecurity and its consequences. In this first symposium, we focus on health and well-being consequences of job insecurity. Special attention is given to reviews of the evidence of the relationship between job insecurity, and health and well-being, followed by an analysis of the macro level antecedents of insecurity. The last article discusses job insecurity as a mediator between specific workplace stressors and an aspect of health: pain experiences. The papers of this symposium discuss findings from a large variety of countries (including a European comparison), related to different operationalisations of the job insecurity construct. Papers included in the symposium:

1. Birgit Köper, Susanne Gerstenberg & Joachim Hüffmeier. Systematic Review on the relationship of job insecurity and health.
2. De Witte, H., Pienaar, J. & De Cuyper, N. Review of 30 years of longitudinal studies on the association between job insecurity and health and well-being: Is there causal evidence?
3. Beatrice Piccoli & Hans De Witte. Job insecurity perceptions and individual well-being: Moderation by macro-economic factors. A multilevel analysis in a cross-country perspective
4. Mauricio E. Garrido Vazquez, Maria U. Kottwitz, Sophie Braun & Kathleen Otto. "That's all part of the job!": qualitative job insecurity as mediating link between illegitimate tasks at the workplace and pain experiences
5. Jurgita Lazauskaite-Zabielske, Ieva Urbanaviciute, Hans De Witte, & Tinne Vander Elst. The Role of Overall Justice Judgments in the Relationship between Job Insecurity and Attitudinal Outcomes: A Test of Mediation

### **S23: Systematic Review on the Relationship of Job Insecurity and Health**

Birgit Köper<sup>1</sup>, Susanne Gerstenberg<sup>1</sup>, Joachim Hüffmeier<sup>2</sup>

<sup>1</sup>*Federal Institute for Occupational Safety and Health, Dortmund, Germany*, <sup>2</sup>*TU Dortmund University, Dortmund, Germany*

**Aim:** The aim of this contribution is to review current research on the relationship of job insecurity (JI) and health based on a broad scoping review.

**Method:** We conducted our search for literature in the databases Psyn dex, Psychinfo, Pubmed/Medline and Econlit. The search focused on the time from 2000 until October 2014 and used "Job insecurity, job security, employment uncertainty and job uncertainty" as key words. It included journal articles, dissertations and book chapters in English and German language. Studies were included if they referred to a work context and considered associations of quantitative JI and health.

**Results:** 223 studies reporting associations of quantitative JI and health were included, most of them published in Europe followed by the US, Canada, Asia and Australia. The studies were in the majority of cases cross-sectional and had mixed samples in terms of sectors and job types. There was no standard for JI measures: Single item measures, self-developed measures and different standardised multi-item measures were used.

The various health outcomes were categorised into "mental health", "physical health" and "general health" with most associations found for mental health. In this group the studies referred predominantly to the association of JI and affective disorders, followed by (the lack of) psychological well-being and burnout. As for physical health a considerable number of studies referred to musculoskeletal disorders and cardio-vascular disorders. Self-assessed general health was often (additionally) considered.

Our results revealed more consistent and higher mean correlations between JI and mental health than between JI and physical or general health. As moderators of the relationship between JI and health we could identify type of contract, job control/latitude, employability, social support and organizational culture.

**Conclusions:** We found stronger and more consistent relationships between mental health as opposed to physical health or self-assessed general health. This is in line with other findings in the JI literature: Negative affective states or disorders can be considered closer in time to JI as a crucial stress experience, whereas other (physical) health impacts may occur only after a longer period of JI exposure. It is important to understand the organizational process starting from strategic decisions which induce job insecurity to various health outcomes.

### **S24: Review of 30 Years of Longitudinal Studies on the Association between Job Insecurity and Health and Well-Being. Is there Causal Evidence?**

Hans De Witte<sup>1, 2</sup>, Jaco Pienaar<sup>3</sup>, Nele De Cuyper<sup>1</sup>

<sup>1</sup>*WOPP-O2L KU Leuven, Leuven, Belgium*, <sup>2</sup>*Optentia NWU, Vanderbijlpark, South Africa*,

<sup>3</sup>*Potchefstroom NWU, Potchefstroom, South Africa*

**Objective:** In this review article, we present an overview of the results of longitudinal studies on the consequences of job insecurity for health and well-being. We discuss the evidence for normal causation ('does job insecurity influence outcomes?'), reversed causation ('do specific outcomes predict job insecurity?'), and reciprocal causation. We also review the various theories used to develop the hypotheses and whether theory has been used at all.

**Method:** Scientific and scholarly databases were searched in order to find all existing articles. We found 57 longitudinal studies published since 1987 in a variety of countries throughout the world. All articles were summarized in an encompassing table.

**Results and conclusions:** The results show strong evidence for normal causation, in which job insecurity influences both psychological well-being and somatic health over time. The results were somewhat dependent on the type of outcome variable analyzed, with clear evidence regarding exhaustion (burnout), general mental/psychological well-being, self-rated health, and a variety of somatic complaints. For aspects such as job satisfaction, work engagement and psychosomatic complaints, the results suggested normal causation in half to two-thirds of the studies only. Reversed or reciprocal causation was rarely studied, and when studied, rarely found.

**Conclusions:** Job insecurity influences health and well-being over time, rather than the other way round. Limitations and suggestions for future research are discussed.

### **S25: Job Insecurity Perceptions and Individual Well-being: Moderation by Macroeconomic Factors. A Multilevel Analysis in a Cross-Country Perspective**

Beatrice Piccoli, Hans De Witte

*University of Leuven (KUL), Leuven, Belgium*

**Aims.** This study examines the relationship of subjective job insecurity and macroeconomic parameters with psychological well-being, in different European countries. Applying a multilevel approach in a cross-country perspective, job insecurity and well-being are measured at the individual level, whereas country-level data refer to economic labour market statistics. Firstly, we intend to clarify the nature of the relationship between job insecurity and economic indicators (such as unemployment rate, GDP growth, social security expenditure, etc.). Secondly, we examine the interplay between subjective job insecurity and objective macroeconomic factors in explaining psychological well-being. Theoretically, the study is based on COR and emotion contagion theories. Empirically, the proposal draw on a sample of European employees from different countries.

**Method.** Data derive from ESS and EUROSTAT for some European countries. As our data set consists of two data levels (individuals and countries), multilevel analyses were used to test our hypotheses. Multilevel correlations as well as multilevel regressions including control variables were analyzed. Hierarchical linear modeling to test cross-level interactions was used for moderation hypotheses.

**Results.** Specific results and their implications will be presented during the symposium. We expect a joint impact of subjective job insecurity and objective economic parameters on individual well-being.

**Conclusions.** Our conclusions aim to evaluate if macroeconomic conditions of a country are salient for the relationship between job insecurity and well-being. In this way we may evaluate the spillover effects from economic parameters to individual perceptions of job insecurity and its outcomes. From a practical standpoint, this study might suggest that governmental politics related to employment security affect individual-level reactions to job insecurity.

## **S26: "That's All Part of the Job!": Qualitative Job Insecurity as Mediating Link Between Illegitimate Tasks at the Workplace and Pain Experiences**

Mauricio E. Garrido Vasquez, Maria U. Kottwitz, Sophie Braun, Kathleen Otto  
*Philipps University of Marburg, Marburg, Germany*

Illegitimate tasks are such that are either perceived as being unnecessary or unreasonable as they cannot be demanded from someone in relation towards one's professional role. It is known that mental strain is experienced when employees have to deal with such tasks leading in the long run also to negative consequences for somatic health, as musculoskeletal pain, for example. Whereas the link between illegitimate tasks and pain could be established, its underlying psychological mechanism still has to be explored. We like to argue that qualitative job insecurity defined as threat of worsening of central job features would work as a mediator in this relationship. In an online survey, 120 employees were asked about their qualitative job insecurity perceptions, illegitimate tasks and pain experiences. Moreover, important controls were considered as neuroticism, social stressors, and physical demands as well as physical strain that might also have an impact on physiological stress reactions. In line with our assumptions, cross-sectional as well as longitudinal data indicate that performing illegitimate tasks is associated with higher qualitative job insecurity perceptions in employees and in that somatic health is negatively affected. We discuss the central role of qualitative job insecurity as link between illegitimate tasks and employees' health.

## **S27: The Role of Overall Justice Judgments in the Relationship between Job Insecurity and Attitudinal Outcomes: A Test of Mediation**

Jurgita Lazauskaite-Zabielske<sup>1</sup>, Ieva Urbanaviciute<sup>1</sup>, Hans De Witte<sup>2, 3</sup>, Tinne Vander Elst<sup>4, 2</sup>

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<sup>4</sup>*IDEWE, External Service for Prevention and Protection at Work, Leuven, Belgium*

This study aims to explore the role of overall justice perceptions of the organisation in the relationship between qualitative job insecurity and employee attitudes towards the organisation. Overall justice refers to individuals' global assessment of the fairness of a social entity (in this study – the organisation), and plays an important role in how individuals judge and react to events referring to organisational justice (Lind, 2001; Van den Bos, Lind, Wilke, 2001). Existing studies usually refer to uncertainty management theory (Lind, Van den Bos, 2002) and show various types of perceived fairness to mitigate the negative correlates of job insecurity (Silla et al., 2010; Piccoli et al., 2011). In this study, we draw on social exchange theory and suggest that job insecurity may signal a change initiated by the organisation in the exchange relationship between the organisation and the employees, which results in corresponding employee reactions. More precisely, the very threat of losing one's job or its characteristics may question the justice of the organisation and its decisions in general, and impair employees' positive attitudes towards the job and the organisation. Consequently, we expected overall justice to mediate the relationship between qualitative job insecurity and affective organisational commitment, turnover intentions, satisfaction with the job and the organization.

In total, 580 employees were surveyed. To test the hypotheses, mediation analysis using PROCESS macro was performed. The results partially supported our hypotheses. Namely, overall justice was found to fully mediate the association between job insecurity and affective commitment, turnover intentions, and satisfaction with the organisation, and to partially mediate the relationship between qualitative job insecurity and job satisfaction. The study findings add to the literature, analysing the mechanism underlying the job insecurity-outcomes relationship and highlighting the explanatory role of overall justice judgements.

## **Symposium: Recent developments in workplace bullying - Part 1: New forms and insights in the bullying phenomenon**

Chair: Elfi Baillien<sup>1</sup>

Discussant: Whitney Van den Brande<sup>2</sup>

<sup>1</sup>KU Leuven, Belgium, <sup>2</sup>Group IDEWE, Leuven, Belgium

Over the last decades, studies increasingly focused on the concept of workplace bullying: a form of counterproductive work behaviour that includes an escalating process characterized by harassing, offending, or socially excluding someone or negatively affecting someone's work. Scholars generally agree that this process lasts for at least 6 months, and that its prevalence ranges between 3% and 15 % depending on measurement and analyses applied. Recently, however, researchers identified voids in the definition and conceptualisation of the bullying phenomenon. First, they underlined that the conceptual differentiation between bullying and related constructs such as interpersonal conflicts has not clearly been established yet (see Hershcovis, 2011). Second, the rise of information and communication technologies at work paved the way for a new form of bullying – cyberbullying – at work which has rarely been studied so far. Third, studies to date have not tested the widely expected assumption regarding the escalation of workplace bullying over time. The five studies included in this symposium aim to address these voids. First, Baillien and colleagues present findings revealing the different nature of conflicts in a group of victims versus a group of non-victims of bullying; attesting for the conceptual differentiation between interpersonal conflicts and bullying. Second, three studies focus on cyberbullying at work: Forssell and colleagues investigate the phenomenon of cyberbullying from a gender and power perspective, Vranjes and colleagues study the role of responsibility – who do victims of cyberbullying blame – in the cyberbullying process. Third, Notelaers and colleagues develop new insights in the workplace bullying process by revealing the nature of the bullying escalation process over time in a four wave longitudinal sample.

### **S28: Interpersonal Conflict and Conflict Escalation amongst Victims and Non-victims of Workplace Bullying**

Elfi Baillien<sup>1</sup>, Jordi Escartin<sup>2</sup>, Dieter Zapf<sup>3</sup>, Claudia Gross<sup>3</sup>

<sup>1</sup>KU Leuven, Brussels, Belgium, <sup>2</sup>Universitat de Barcelona, Barcelona, Spain, <sup>3</sup>Goethe University Frankfurt, Frankfurt, Germany

The field of counterproductive work behaviour (CWB) includes a range of concepts each addressing a conceptual case that differentiates the construct from others. Research to date however shows two shortcomings: (1) empirical evidence has not yet attested the differences between the concepts (Hershcovis, 2011) and (2) there is surprisingly little cross-fertilization between related areas (Raver, 2013). Following these concerns, we aim to differentiate workplace bullying with a related CWB from the target's perspective, being interpersonal conflict (Spector & Jex, 1998).

Our goal is to test whether interpersonal conflict and workplace bullying are distinctive phenomena based on the criteria exclusively belonging to the workplace bullying definition. We hypothesized that targets are by definition more often exposed to work-related conflicts at work, more often experience to be inferior in the conflict situation including that they are less in control and therefore less able to solve the conflict. Because targets see themselves as victims of systematic negative behaviour directed against them they should see conflict episodes more often as a continuation of a former conflict and less often as an isolated event. Finally they should less often report that conflicts happened in spite of best efforts to avoid them and should report more often that the other party started the conflicts because of negative intentions directed against them.

Our hypotheses were tested in an event-based diary study (see Ohly, Sonnentag, Niessen, & Zapf, 2010) comparing a group of workplace bullying victims with a control group of non-victims. A group of 47 targets and 63 non-targets were identified and filled out a questionnaire twice with a time lag of 6 months. Within this period they filled out a diary on conflicts at work. Participants were told that they would take part in a study on social conflicts at work. "Bullying" was not mentioned in the diary. The targets reported 640 conflicts and the non-targets reported 430 conflicts: targets reported significantly more work-related conflict as compared to non-targets. There was however no difference between reports of personal conflicts between targets and non-targets. The results furthermore supported our hypotheses. Implications of the study are discussed.

## **S29: Do Emotions Instigate Negative Online Behaviour? Introducing and Testing the Emotion Reaction Model of Workplace Cyberbullying**

Ivana Vranjes<sup>1</sup>, Elfi Baillien<sup>1</sup>, Heidi Vandebosch<sup>2</sup>, Sara Erreygers<sup>2</sup>, Hans De Witte<sup>1,3</sup>

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Workplace bullying has already been proven to be a major work stressor (Baillien et al., 2011), having detrimental effects on both individual and organization well-being (Samnani & Singh, 2012). In the recent years, there has been an increase in the use of Information Communication Technologies (ICTs) at the workplace (Eurostat, June 2015). This change in the way people work inevitably broadens the scope of bullying behaviour to the online context. In that respect, there is already evidence of the presence of cyberbullying in the workplace (e.g. Brack & Caltabiano, 2014; D'Cruz & Noronha, 2013; Farley e.a., 2015).

In order to understand this phenomenon, we have developed an Emotion Reaction model of workplace cyberbullying (Vranjes, Baillien, De Witte, Vandebosch, Erreygers, 2015). In this study, the main hypotheses of this model are tested. Following the stressor-strain model (Fox, Spector & Miles, 2001; Jex & Beehr, 1991; Spector, 1998) and previous findings regarding the antecedents of workplace bullying, we hypothesize that stressors at work will give rise to workplace cyberbullying, both for victims and perpetrators (hypothesis 1). In addition, building on the Affective Events Theory (Weiss & Cropanzano, 1996), we hypothesize that the experience of negative emotions will mediate this relationship (hypothesis 2). That is, sadness and fear will mediate the stressor-cyberbullying relationship for the victims (hypothesis 2a) and anger will mediate this relationship for the perpetrators (hypothesis 2b). Furthermore, we expect that applying emotion regulation strategies will modify this relationship, both for victims and perpetrators (hypothesis 3). That is, application of emotion regulation strategies will negatively reduce the feeling of emotions as a consequence of workplace stressors (hypothesis 3a) and their subsequent expression in the form of cyberbullying (hypothesis 3b).

To test the different hypotheses, we collected data from a large sample of mainly governmental institutions (N=1501). On this sample, a conditional process analysis was applied using the 2.0 version of the MODMED macro for SPSS.

The preliminary findings support all hypotheses for the perpetrators. Regarding victims, all but hypothesis 3a are confirmed. These findings suggest that emotions in the workplace can play an important role in the emergence of cyberbullying at work. The contributions are twofold. This study expands the literature on workplace bullying by investigating the underexplored phenomenon of workplace cyberbullying. Furthermore, as there is a paucity of knowledge regarding the perpetrators of workplace bullying, this study explores both (a) processes leading to cyberbullying victimization and (b) cyberbullying perpetration.



### **S30: Gender and Power Perspectives on Cyberbullying in Working Life**

Rebecka Forssell, Sandra Jönsson, Tuija Muhonen  
*Malmö University, Malmö, Sweden*

With the development of communication technologies such as emails, text messages and social network sites, new forms of deviant behaviour in workplaces have emerged, referred to as cyberbullying. Cyberbullying, i.e. bullying via electronic devices, has so far mostly been studied among children and adolescents, whereas few studies take their departure in a working life context (Brack & Caltabiano, 2014). Based on the results of two studies examining cyberbullying in Swedish working life, the aim of the presentation is to discuss cyberbullying from a gender and power perspective. Gender and organisational position are central elements in bullying as they encapsulate matters on power. Power relations are important to understand within face-to-face bullying, however, of equal importance are the new dimensions of power brought to life with digital communication.

The results of the studies are drawn from a representative sample of 3371 respondents. The data was collected by an online questionnaire, distributed by email to randomly selected individuals between the ages of 25-65, living in Southern Sweden. The self-labelling method along with the online negative acts questionnaire (Onaq) developed by Jönsson et al. (2015), were used to examine the prevalence of cyberbullying and face-to-face bullying. T-tests and Chi-square tests were used to analyse differences between men and women, managers and non-managers, exposure to cyberbullying and face-to-face bullying. Separate MR-analyses have been conducted to study predictors of cyberbullying behaviours for male managers, female managers, male non-managers and female non-managers.

In both studies, differences related to gender and organisational position was observed. The first study showed that while no significant relationship between gender or managerial position were observed for individuals being exposed to face-to-face bullying, men and managers were to a higher degree than women and non-managers being exposed to cyberbullying. The second study showed differences in predicting cyberbullying behaviour related to the target's gender and organisational position. While low support from managers increased the likelihood of becoming a target of cyberbullying for male managers, male non-managers and female non-managers, this relation did not apply for female managers. Only for female managers, low support from colleagues increased the prediction of exposure to cyberbullying behaviours. These findings suggest that traditional power structures within bullying become challenged when electronic devices are being used. Moreover, it implies that men and women have different social experiences in terms of holding power in working life. As female managers are in minority in working life other factors may be involved when predicting exposure of cyberbullying behaviour for female managers than for the other three groups.

### **S31: Who do Targets of Cyberbullying Blame for Their Experiences and Does it Matter?**

Samuel Farley<sup>1</sup>, Christine Sprigg<sup>1</sup>, Carolyn Axtell<sup>1</sup>, Iain Coyne<sup>1</sup>

<sup>1</sup>*University of Sheffield, Sheffield, UK,* <sup>2</sup>*University of Loughborough, Loughborough, UK*

Workplace cyberbullying broadly refers to bullying conducted through technology in the context of work. Certain features distinguish cyberbullying from traditional bullying, including its ability to cross the work-home boundary, its visibility and the separation of perpetrators, targets and bystanders. Due to the spread of information and communication technologies in modern workplaces, investigating this novel form of workplace bullying has become increasingly important.

There are still relatively few studies on workplace cyberbullying and much of the current knowledge comes from cross-sectional studies which have often been conducted without theoretical underpinnings. As such, this study used the attributional model of workplace harassment to investigate the impact of workplace cyberbullying over time. The model suggests that targets of harassment attribute blame to themselves, the perpetrator and their organisation in varying degrees. If targets mostly blame themselves for experiencing harassment, a reduction in their well-being is hypothesised. Whereas if targets blame the perpetrator they are likely to respond with negative attitudes and behaviours against the perpetrator. Similarly if they mostly blame their organisation, reduced performance and engagement is predicted to occur.

To test the propositions outlined in the model, an online survey was distributed at two time points separated by a six month time lag. A total of 219 employees completed the first survey. These responses are currently being matched with responses to the second survey. Analysis of the results will allow for greater reflection on the causal impact of workplace cyberbullying. This will add to the growing evidence base on cyberbullying outcomes and the study will also facilitate a greater understanding of the role that attributions play in the bullying process. Several researchers have suggested that there is a need to examine how attributions influence target reactions to workplace bullying. This study sought to answer those calls using an established theoretical model.

### **S32: Workplace Bullying: A Gradual Process?**

Guy Notelaers<sup>1</sup>, Tinne vander Elst<sup>2</sup>, Elfi Baillien<sup>3</sup>, Hans De Witte<sup>3,4</sup>

<sup>1</sup>*University of Bergen, Hordaland, Norway*, <sup>2</sup>*IDEWE, Vlaams Brabant, Belgium*, <sup>3</sup>*University of Leuven, Vlaams Brabant, Belgium*, <sup>4</sup>*North-West University, North-West, South Africa*

Bullying is often described as an escalating process in which the target becomes increasingly stigmatised and victimised over time and leaving him/her unable to cope with the situation (Einarsen, 1999; Leymann, 1990). It is assumed that subjects targeted with negative acts gradually transition through subsequent stages where bullying behaviours become increasingly apparent and the target finally ends up as a victim. Scholars hinted towards a gradual escalation where subjects transition across 5 stages. However, this research applied very long time lags (i.e. 2 and 3 years) whereas bullying is defined to develop in 6 months (Einarsen, Hoel, Zapf, & Cooper, 2003; 2011). In our study, we address these shortcomings by exploring the process of workplace bullying using four-wave data from Belgian employees with a six months' time lag yielding 3306 cases (5549 time points). Bullying was measured with the Short Negative Acts Questionnaire (Notelaers & Einarsen, 2008). The different stages and the transitions between stages will be investigated by different Latent Class Markov models in Latent Gold 5 (Vermunt & Magidson, 2013). 5 Pre-liminary results showed that a six latent state Markov model fitted the data best. The six different latent stages covered similar classes as detected in cross-sectional research (e.g. Notelaers et al., 2011).

The first class in our mixture model yielded respondents that did not transition from the initial position in the process (33% of the respondents). The second class comprised of the movers (67% of the respondents). The transitions probabilities revealed that the lower the exposure at baseline, the higher the probability of not becoming more exposed to bullying over time. We additionally found a gradually escalatory process and a steep deescalatory process. This latter finding was rather unexpected, and may possibly be explained as a 'regression to the mode' phenomenon. Our results indicate that future research understanding processes and factors that contribute to the development of workplace bullying may be in vein. However, the investigating factors and processes that contribute to the de-escalation may be more fruitful. Also it may be fruitful to investigate factors explaining the initial stages of workplace bullying since 33% of the respondents did not transition at all over time.



## **Symposium: Job insecurity - Part 2: Mediation and moderation, with a focus on non-West European countries**

Chair: Hans De Witte

The negative consequences of job insecurity have been studied extensively during the last decades. Research suggests job insecurity to be one of the most important work stressors, and its importance is further emphasized by the increase of the economic crisis since 2008. This symposium is a succession of a series of symposia at previous EAOHP conferences, as it presents some recent findings on job insecurity and its consequences. As such, it complements 'symposium 1' on job insecurity at this conference.

In this second symposium, we focus on mediation and moderation, and on the job insecurity – performance relationship, that has received less research attention in the past. A special feature of this second symposium is the focus on both quantitative and qualitative job insecurity, and the focus on non-West European countries, e.g. Eastern-Europe, and Australia, thus also covering a wider variety of countries than usual in job insecurity research. Papers included in the symposium:

1. Gabriel Fischmann, Coralia Sulea, Peter Kovacs, Dragos Iliescu, Hans De Witte. Differences between qualitative and quantitative job insecurity in relationship with nine types of performance
2. Prudence M. Millear & Mark Nugent. The effect of workplace and personal resources to counteract job insecurity amongst casual and contract staff working in an Australian university
3. Ieva Urbanaviciute, Jurgita Lazauskaite-Zabielske, Tinne Vander Elst & Hans De Witte. Qualitative job insecurity and employee well-being: mediation by basic need satisfaction
4. Delia Virgă, Anja Van den Broeck, Hans De Witte. How resources buffer the association between job insecurity and performance: Need satisfaction as explanation

### **S34: Differences between Qualitative and Quantitative Job Insecurity in Relationship with Nine Types of Performance**

Gabriel Fischmann<sup>1,2</sup>, Coralia Sulea<sup>2,1</sup>, Peter Kovacs<sup>3</sup>, Dragos Iliescu<sup>4</sup>, Hans De Witte<sup>1,5</sup>

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This study adds to the understanding of the negative effect that job insecurity has on employee performance, by investigating differences between qualitative and quantitative job insecurity when predicting individual performance at the task, team, and organization level, taking into account the individual's proficiency, adaptivity, and proactivity. We expect both types of job insecurity to be negatively related to performance. The hypotheses were examined using structural equation modelling in a sample of 225 Romanian employees. Data were collected at a single point in time. Results showed that job insecurity was negatively associated mostly with the proficiency facet of performance, and least with the proactivity dimension. Our analyses also indicated that qualitative job insecurity was negatively associated with more performance facets than quantitative job insecurity. This research contributes to the job insecurity literature by being one of the few studies to compare qualitative and quantitative job insecurity effects. Additionally, the in-depth look at performance facets sheds light on a possible reason why existing research on the relationship between job insecurity and performance has not been completely consistent in results. Being cross-sectional in nature, our study does not allow us to draw conclusions regarding causality. Given the importance of the topic, it would be warranted to replicate the study with different samples.

### **S35: The Effect of Workplace and Personal Resources to Counteract Job Insecurity amongst Casual and Contract Staff Working in an Australian Regional University**

Prudence Millear, Mark Nugent

*University of the Sunshine Coast, Maroochydore, Queensland, Australia*

Employment conditions in higher education in Australia are changing with an increasing reliance on casual and contract staff in academic, administrative and research-focused areas. The current study explored how personal and workplace resources of staff without permanent, on-going appointments could mitigate the effects of inherent insecurity on job outcomes, such as job satisfaction, for employees at a regional university. It was expected that staff with more resources would be less affected by worries about job insecurity.

Volunteers (n=130, 21.7% response rate) from casual and contract staff completed a cross-sectional, online survey about workplace conditions (e.g., job autonomy, fairness), personal resources (e.g., dispositional optimism), factors of job security (e.g., felt insecurity, employability), and the outcomes of job satisfaction, organisational commitment, burnout (as emotional exhaustion, cynicism and professional efficacy), and turnover intentions. Qualitative comments added the most challenging and rewarding aspects of their work. Participants (75% female) were aged 19 to 73 years (M = 44.7, SD =12.2) and in academic (n = 57), administrative (n = 60), and research-focused (n = 13) roles. Most participants (n = 103) had university qualifications. Hierarchical multiple regressions entered personal resources (Block 1), workplace resources (Block 2), and job security factors (Block 3) for each outcome. Over and above all others, fairness was the strongest predictor of job satisfaction ( $\beta = .50^{***}$ ), affective organisational commitment ( $\beta = .47^{***}$ ), emotional exhaustion ( $\beta = -.31^{**}$ ) and cynicism ( $\beta = -.22^*$ ), with optimism and self-efficacy remaining significant predictors of these outcomes. Turnover intentions were predicted by lack of employment prospects and skill discretion, rather than personal or workplace resources.

To further examine the causal pathways, additional analyses explored how job insecurity and fairness mediated the effect of personal resources on these outcomes, finding that the indirect pathways, particularly from fairness, added significantly to the total effects of the models. Finally, the qualitative comments indicated that the absence of fairness (e.g., inadequate preparation and/or supervision of work) and uncertainty of future job prospects made work challenging, whilst positive interactions with students (e.g., mentoring their academic outcomes) and supportive colleagues made work rewarding. In conclusion, rather than job insecurity per se being problematic, where staff felt that they were fairly treated by management, they remained satisfied and committed to their work and avoided burnout. The participants in this study by the nature of their employment were already more insecure than staff in permanent positions. Fairness implies a just process of knowing when work will be available, and how that work will be done. Combined with self-efficacy and optimism, and good employment prospects, university management can address these areas to retain a valuable part of their workforce.

### **S36: Qualitative Job Insecurity and Employee Well-Being: Mediation by Basic Need Satisfaction**

Ieva Urbanaviciute<sup>1</sup>, Jurgita Lazauskaite-Zabielske<sup>1</sup>, Tinne Vander Elst<sup>3</sup>, Hans De Witte<sup>2, 4</sup>

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This study aimed to explore a possible explanatory mechanism by which qualitative job insecurity relates to decreased employee well-being through basic need (dis)satisfaction. Satisfaction of the basic needs for autonomy, competence, and relatedness in the workplace

can be regarded as a precondition for employee well-being. According to the Self-Determination Theory (SDT; Deci & Ryan, 2000), need satisfaction leads to psychological growth and integrity and is essential for optimal functioning of the individual in all life domains. On the contrary, the conditions of threat or deprivation will lead to the emergence of the so-called non-optimal functioning, which generally means a decrease in well-being (Ryan, 1995; Deci & Ryan, 2000). In organizational contexts, qualitative job insecurity may impose such a threat. It refers to anticipated loss of valued working conditions and, in this way, may be considered to be detrimental for the satisfaction of the basic needs (e.g. Van den Broeck et al., 2014). Based on this, we hypothesized qualitative job insecurity to negatively relate to employees' autonomy, competence, and relatedness need satisfaction, which, in turn, were hypothesized to result in decreased well-being. In this study, employee well-being was defined by two satisfaction indicators that apply either to the working domain or go beyond it. More specifically, we measured: (1) job satisfaction, which denotes an overall satisfaction with one's job, and (2) life satisfaction, which is a broader well-being indicator revealing how well one feels about his/her life in general.

In total, 458 Lithuanian employees took part in the study. The data were collected via an on-line survey platform. To test the hypotheses, multiple mediation analysis was carried out using MPlus. The results showed partial support for our hypotheses. Qualitative job insecurity negatively related to autonomy, competence, and relatedness need satisfaction. Autonomy need satisfaction was a salient mediator in the link between job insecurity and job satisfaction, whereas the relation between job insecurity and life satisfaction was mediated by autonomy and competence need satisfaction. To generalize, these findings contribute to an explanation of the negative outcomes of qualitative job insecurity and highlight the importance of addressing the basic needs within organizational settings.

### **S37: How Resources Buffer the Association Between Job Insecurity and Performance: Need Satisfaction as Explanation**

Delia Virga<sup>1</sup>, Anja Van den Broeck<sup>2</sup>, Hans De Witte<sup>2</sup>

<sup>1</sup>West University, Timisoara, Romania, <sup>2</sup>KU Leuven, Brussels, Belgium

**Purpose:** Researchers and managers need to know under what conditions employees' negative responses to job insecurity can be buffered. This study contributes to the understanding of the relationship between job insecurity and job performance from its moderators and mediators perspective, particularly in the Romanian workforce. Our study aims to examine the mediating role of need satisfaction at work in the relationship between job insecurity and performance, and to investigate the moderating role of self-efficacy in the relationships between job insecurity and needs satisfaction.

**Design/Methodology:** The data collected from two sample of 242 and 258 Romanian employees. The hypotheses were tested using the regression analysis with PROCESS macros in both sample for check the stability of the moderated mediation model.

**Findings:** Results supported a moderated mediation model in which need satisfaction at work totally mediates the relation between job insecurity and performance, while self-efficacy moderates the relationships between job insecurity and need satisfaction, in both sample. The conditional indirect effect of job insecurity on need satisfaction was significant when self-efficacy was high and non-significant when self-efficacy was low in Sample 1 and reverse in Sample 2.

**Originality/value:** The present study extends the existing evidence related to need satisfaction at work, as mediator, included in relationship between job insecurity and performance, by highlighting the buffer effect of self-efficacy in the relationship between job insecurity and need satisfaction at work.

## **Symposium: Recent developments in workplace bullying - Part 2: Advanced studies on antecedents and moderators**

Chair: Whitney Van den Brande<sup>1</sup>

Discussant: Elfi Baillien<sup>2</sup>

<sup>1</sup>Group IDEWE, Leuven, Belgium, <sup>2</sup>KU Leuven, Belgium

Over the last decades, scholars have increasingly studied the concept of workplace bullying: a form of counterproductive work behaviour that includes an escalating process characterized by harassing, offending, or socially excluding someone or negatively affecting someone's work. They generally agree that this process lasts at least 6 months, and that its prevalence ranges between 3% and 15 % depending on measurement and analyses applied. Studies to date detected a range of antecedents of workplace bullying which are located at the individual and at the organisational level. First, workplace bullying may be elicited by personal factors (e.g. gender and age) and personality. Second, organisational characteristics (e.g. role conflict and job insecurity) fuel a stressful working environment and workplace bullying. Despite valuable insights in potential causes of workplace bullying, this line of studies yields two gaps. First, research to date has very rarely combined both personal and organisational characteristics as predictors of workplace bullying (Samnani & Singh, 2015). Second, scholars called for more research investigating mediators and moderators in the explanatory process towards workplace bullying (Nielsen & Einarsen 2012). Such knowledge is important as it provides guidelines to prevent future workplace bullying.

The five studies included in this symposium particularly aim to address these gaps in current research. Van den Brande and colleagues study the moderating role of coping strategies (i.e. individual antecedent and moderator) in the relationship between work stressors (i.e. organisational antecedent) and being a target of workplace bullying. Preminiene and colleagues investigate how one's personality attributes to the exposure to workplace bullying via conflict solving styles (i.e. mediation). Vandeveldel and colleagues examine the lagged causal relationship between person-environment mistfit – a concept that explicitly combines the individual with the organisation – and workplace bullying. Vander Elst and colleagues aim to explain the relationship between organisational change and bullying by introduce role conflict, job insecurity and control as intervening factors in a moderated mediation model using a four wave longitudinal sample. Finally, Verdasca presents evidence regarding the association between bullying and conflict management from Portugal, a country in which the bullying phenomenon has rarely been investigated to date.

### **S38: The Relationship between Work Stressors and Being a Target of Workplace Bullying: Problem- and Emotion-focused Coping Strategies as Moderators?**

Whitney Van den Brande<sup>1,3</sup>, Elfi Baillien<sup>2</sup>, Hans De Witte<sup>1,5</sup>, Tinne Vander Elst<sup>3,1</sup>, Anja Van den Broeck<sup>2,5</sup>, Lode Godderis<sup>3,4</sup>

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This study investigates the interaction between the work environment (i.e. work stressors) and individual factors (i.e. coping strategies) as predictors of workplace bullying. Being bullied has a negative impact on employee health and well-being. Despite its importance, insights in the antecedents of workplace bullying are fragmented. On the one hand, based on the work environment hypothesis (Leymann, 1996), research indicates that a stressful work environment triggers workplace bullying. On the other hand, some employees seem to be more vulnerable to bullying than others due to specific individual factors. So far, research combining both aspects is scarce. In this study, we include both types of factors and hypothesize that (1)

problem-focused coping strategies (i.e. active coping, planning and seeking social support for instrumental reasons) buffer the negative relationship between work stressors (i.e. workload, role conflict, job insecurity and role ambiguity) and becoming a target of workplace bullying; while (2) emotion-focused coping strategies (i.e. focusing on and venting of emotions, behavioural disengagement, mental disengagement and seeking social support for emotional reasons) boost the negative relationship between work stressors (i.e. workload, role conflict, job insecurity and role ambiguity) and workplace bullying.

Data were collected in 2014 via online and paper-and-pencil questionnaires. The final sample consisted of 3015 Flemish employees from 16 different organisations. In order to test the hypothesis of this study, AMOS was used to perform Moderated Structural Equation Modelling. No evidence was found for the buffering role of problem-focused coping strategies in the stressor-bullying relationship. Instead, planning unexpectedly boosted the relationship between job insecurity and workplace bullying. Furthermore, in line with predictions, we also found boosting effects of multiple emotion-focused coping strategies. Focus on and venting of emotions and behavioural disengagement boosted the relationship between job insecurity, role conflict and role ambiguity on the one hand and bullying on the other hand. Mental disengagement boosted the relationship between role conflict and workplace bullying, as well as the relationship between role ambiguity and bullying. Finally, seeking social support for emotional reasons boosted the relationship between role ambiguity and workplace bullying. Further research is needed to investigate possible causal and reversed associations between the study variables.

### **S39: Workplace Bullying During Times of Change: Role Conflict, Job Insecurity and Control as Intervening Factors**

Tinne Vander Elst<sup>1, 2</sup>, Elfi Baillien<sup>2</sup>, Whitney Van den Brande<sup>1, 2</sup>, Hans De Witte<sup>2, 3</sup>, Lode Godderis<sup>2, 1</sup>

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Organizational change has been introduced as an important environmental factor facilitating workplace bullying (Hoel & Salin, 2003). Although scholars have demonstrated an empirical relationship between organizational change and workplace bullying, few studies have focused on why organizational changes may stimulate workplace bullying (for exceptions, see Baillien & De Witte, 2009; Skogstad, Matthiesen, & Einarsen, 2007). Two intervening mechanisms have been explored in this respect: organizational changes may (1) increase certain job stressors (e.g., role conflict, workload) and (2) jeopardize the social atmosphere at work (e.g., interpersonal conflicts, competition), which in turn enhance workplace bullying. Previous findings highlight job stressors as the most important explanations: Skogstad et al. (2007) did not find interpersonal conflicts to explain the organizational change–workplace bullying relationship, while role conflict and job insecurity were found to be the only significant explanations of a wide range of job- and team-related stressors in the study of Baillien and De Witte (2009). Although these studies offer valuable initial insights, two voids can be identified: (1) they have focused on being a target of workplace bullying, whereas organizational change could also increase being a perpetrator of workplace bullying and (2) they have used a cross-sectional design, thereby neglecting the possibility of dynamic processes over time.

Hence, this study aims to investigate whether experiencing organizational change affects future workplace bullying, both from a target and a perpetrator's perspective. Additionally, the explaining role of two job stressors are highlighted, namely role conflict and job insecurity, in line with the results of Baillien and De Witte (2009) (i.e., tests of mediation). Finally, we examine whether employees experiencing more control over aspects that may negatively affect

their current working situation may be less prone to become targets after experiencing job stressors, but more likely to become perpetrators of workplace bullying after experiencing job stressors (i.e., tests of moderated mediation).

The hypotheses will be tested using four-wave longitudinal data collected in the period November 2012–May 2014 (time lag of six months between subsequent measurement points) among a heterogeneous sample of 1879 Belgian employees. As we are interested in the dynamic processes underlying the effect of an individual's experience of organizational change on his/her experience of workplace bullying over time, relationships are investigated at the within-person level using multilevel path analysis (measurements are clustered within persons). The results and implications will be presented at the symposium.

#### **S40: The Chicken or the Egg: Cross-lagged Relationships between Person-Environment Misfit and Workplace Bullying**

Katrien Vandevelde<sup>1</sup>, Elfi Baillien<sup>1</sup>, Guy Notelaers<sup>2</sup>

<sup>1</sup>*KU Leuven, Campus Brussels, Brussels, Belgium*, <sup>2</sup>*University of Bergen, Bergen, Norway*

The current study examines the causal relationship between the different types of person-environment (P-E) misfit and both targets' and perpetrators' reports of workplace bullying. In line with the occupational stressor-strain model, we integrated P-E fit literature with workplace bullying research; where this phenomenon is seen as a form of a social-behavioral strain. We hypothesized that a low fit between the employee and his/her job (P-J), his/her work unit (P-G) as well as her/her organization (P-O) increases workplace bullying over time (i.e. normal causation). Based on scholars' findings of reversed strain-stress relationships, we also tested a reversed causation where workplace bullying predicts low fit. Finally, we compared these two causal relationships with a reciprocal model in which both misfit and bullying influence each other over time. In all, this study adds to the literature by (1) being among the first to explore the combination of both personal and environmental factors as antecedents of workplace bullying by integrating the P-E fit theoretical lens, (2) applying a cross-lagged design which may indicate causality and (3) extending previous research on P-E fit theory by focusing on misfit and exploring its relation with workplace bullying using the recent multidimensional approach of fit theory. Our hypotheses were examined in a full panel two-wave longitudinal design of Belgian employees (N=333) with a time lag of one year.

Preliminary results - in which we tested the manifest SEM model using AMOS 22 - revealed a reversed negative causal relationship between being a target of workplace bullying at Time 1 and P-G fit at Time 2. The other hypothesized relationships were not significant. These findings suggest that being a target of workplace bullying could be regarded as a possible cause of perceived misfit within the group instead of being its consequence. However, since these findings are preliminary, further analyses - applying a latent SEM - will also be presented at the symposium allowing us to compare the results and discuss them in view of theory and future research.

#### **S41: Lifestyle Characteristics of a Target, Conflict Solving Styles and Exposure to Workplace Bullying**

Milda Perminiene<sup>1</sup>, Aidas Perminas<sup>2</sup>

<sup>1</sup>*Kaunas University of Technology, Kaunas, Lithuania*, <sup>2</sup>*Vytautas Magnus University, Kaunas, Lithuania*

One of the recent frameworks that systematized antecedents of workplace bullying is the Three Way Model, presented by Baillien et al. (2009). The authors argued that workplace bullying may develop as a result of the three pathways, e.g. frustration and strain, conflicts and conflict management, and aspects of the team and organization. They also suggested that the



individual characteristics and the work-related antecedents may influence these three pathways and indirectly relate to bullying (Baillien et al., 2009). In the present study we investigated one of the pathways proposed to lead to bullying, by analyzing how one's personality/lifestyle attributes relate to the exposure to workplace bullying via conflict solving styles.

The data analysis of 807 employees (14.2% males and 84.1% females) from three Lithuanian organizations demonstrated that Being Cautious, Going Along, and Taking Charge were positively directly related to exposure to workplace bullying. Higher Belonging/Social Interest was related to lower exposure to bullying via more frequent use of problem solving and less frequent use of forcing. Higher Being Cautious was related to greater exposure to bullying via less frequent use of problem solving. Higher Going Along was related to greater bullying via more frequent use of forcing. Interestingly, on one hand, higher Taking Charge and Wanting Recognition were related to greater exposure to workplace bullying via more frequent use of forcing. On the other hand, they were related to lower bullying via more frequent use of problem solving. The result prompts for inclusion of the situational moderators that would help to identify when problem solving and forcing are used.

It is important to highlight that only two out of four conflict solving styles were significant in explaining the indirect relationship between lifestyle and workplace bullying. The two conflict solving styles of problem solving and forcing are both related to the availability of power, both include high concern for own needs and, hence, are considered to be "assertive" conflict solving styles (Baillien et al., 2013). The present study contributes to the field of workplace bullying in several ways. Previous studies have focused on the direct effects of personality on exposure to workplace bullying. There was little knowledge on the mechanisms through which personality relates to bullying. The present study documents that certain conflict solving styles may partially explain the relationship between lifestyle and workplace bullying and supports one of the pathways in Baillien et al. (2009) the Three Way Model.

#### **S42: The Relationship between Conflicts and WB in Portuguese's Higher Education**

Ana Verdasca

*University of Lisbon, Lisbon, Portugal*

**Purpose:** In Portugal there is scarce evidence about workplace bullying in the higher education. Besides some empirical data collected in the University of Coimbra Hospital (Serra et al, 2005), there is no empirical data on this subject. Thus, in order to further the research about workplace bullying in this sector, we have realized a study in the main private and public Universities of Portugal, to map the domain of the phenomenon and to shed light about the relationship between the occurrence and management of conflicts and workplace bullying (WB). Previous research has identified conflict as an antecedent of WB, both on a theoretical and empirical level (Leyman, 1996; Einarsen, 1999; Vartia, 2001; Hauge et al, 2007). From previous studies we know that active strategies by targets are likely to further the WB escalatory process, being passive strategies most successfully used by victims of bullying; also "fighting" has been proven to relate positively with WB and "problem- solving" negatively with its occurrence (Baillien et al, 2009). Zapf and Gross (2001) have found that victims didn't use a single strategy but often change it during the course of the bullying process.

**Methodology:** Our study was carried on in Portuguese higher education. Our sample was made up of 1182 participants and it is 61% female and 37% male. The majority of respondents are assistant professors (29%) and 19.42% are assistants; 37.4% did not specified their position. Drawing on previous research we expect a positive relationship between the occurrence of conflicts and bullying; additionally, we hypothesize a negative relationship between problem-solving and bullying and a positive one for "yielding", "avoiding" and "fighting". To test these hypotheses we used hierarchical ordinal regression.

Results: The occurrence of workplace bullying was measured both through a definition and a list of behaviours. According to the definition, 5.5% of respondents have been frequently bullied and the most frequent bullying behaviours are: "You are exposed to an unmanageable workload", "You are humiliated and ridiculed in connection with your work" and "You are systematically required to carry out tasks which clearly fall outside your job description". For those who consider themselves bullied at work, the experience has lasted between 1 and 3 years (26.9% of bullied people); the majority was bullied alone by a superior (64%). Regarding conflicts, the positive association between the occurrence of conflicts and bullying was confirmed as well as the assumed association between workplace bullying and conflicts for "problem-solving", "yielding" and "avoiding".

Limitations and implications: The study was limited to higher education in Portugal. The results can be used to help designing intervention policies in the field of Workplace Bullying.

Originality: Research about Workplace bullying is scarce in Portugal; hence the study has a real contribution to the existing research, in a sector where there is no previous research in this field.

### **DOP Symposium: Women, Work and Wellbeing: Support during Challenging Times**

Chair: Gail Kinman<sup>1</sup>

Discussant: Roxane Gervais<sup>2</sup>

<sup>1</sup>*University of Bedfordshire, Bedfordshire, UK*, <sup>2</sup>*Independent Practitioner, UK*

This symposium presents research conducted by members of the British Psychological Society's Division of Occupational Psychology that considers aspects of women's work-related wellbeing. A range of quantitative and qualitative methodologies is utilised to explore several areas that are, as yet, little researched. Each of the four papers considers how organisations can support women more effectively through personal challenges, or when doing work that can be emotionally demanding and traumatising.

The first paper draws on interview data to examine women's experiences of combining work and assisted reproduction treatment. The findings provide insight into women's expectations of support during this stressful time and identify organisational interventions that have the potential to help them cope more effectively. Managing menopausal symptoms at work can be extremely stressful with negative implications for wellbeing and personal functioning. The second paper uses data from an online survey to examine the characteristics of work and the individual that can impact on the wellbeing, job satisfaction and performance of menopausal and peri-menopausal women. Personal characteristics, such as optimism and self-efficacy, were found to be particularly important in predicting performance and wellbeing during menopause. The third paper considers different aspects of compassion in female social workers and how they relate to wellbeing outcomes such as emotional exhaustion, secondary trauma and personal growth. The findings highlighted the importance of self-compassion as a protective resource and the need for interventions to prioritise self-care in a profession that tends to privilege the needs of others was emphasised. The fourth and final paper utilises interpretative phenomenological analysis to explore the work-life balance experiences of working mothers who are in recovery for alcohol or drug addiction. A deep insight is gained into women's experiences and emotions during the 'tri-partite' juggling act between work, family life and recovery. As most of the women managed their recovery in secrecy, gaining the support required to accommodate the demands of work and family and re-gain a sense of belonging in society was challenging.



The findings of the papers will be discussed with particular emphasis placed on the need to support women to help them remain active and healthy participants in the workforce when facing personal challenges and doing work that can be emotionally depleting. The benefits of providing precisely-targeted support for the functioning of organisations as well as for employees and their families during emotionally challenging times will be considered.

#### **S43: Women's Experiences of combining Work and IVF: Sense of Entitlement to Support**

Nicola Payne, Suzan Lewis, Olga van den Akker

*University of Middlesex, Middlesex, UK*

An increasing number of people are currently using assisted reproductive technology (ART) such as in vitro fertilisation (IVF) to conceive. The physical and psychological demands of the process engender significant stress and may be difficult to combine with work. As yet, however, there are no statutory entitlements to absence or flexible working to help employees manage the process. Current work-life balance policies and practices are typically designed to support expectant and existing parents and carers and few organisations have policies in place to support ART users. Little is known about employees' experiences of combining employment and ART treatment and the extent to which users feel entitled to workplace support to help them through this onerous process. This paper discusses ART users' experiences of combining work with treatment and their perceived sense of entitlement to workplace support, based on interviews with 31 women who were using or had previously used ART. Interviews were transcribed verbatim and thematic analysis was conducted.

Women highlighted the emotional and time demands of using ART, which were considered to be very stressful and difficult to combine with the demands of work. Most participants felt entitled to workplace support for four main reasons. Firstly, ART use was considered a medical issue rather than a lifestyle choice and participants often compared themselves to people with other medical conditions. Secondly, ART affects psychological well-being and some women compared their situation with people with mental health problems, or who had experienced bereavement. Thirdly, comparisons were made to statutory supports that were available for expectant and existing parents. Finally, some women felt that employers have some responsibility to support valued employees and emphasised the mutual benefits of doing so such as increased loyalty and commitment. However, the difficulties for employers in providing such support were also acknowledged by some.

While there are organisational constraints to providing support to help women who combine work with ART treatment, this is likely to be mutually beneficial. Further research is required to identify the type of support that is most useful to help women manage the dual stressors of working and engaging in treatment.

#### **S44: Assessing Menopausal Women's Well-Being, Performance and Job Satisfaction at Work**

Roxane Gervais<sup>1</sup>, Prudence Millear<sup>2</sup>

*<sup>1</sup>Independent Practitioner, UK, <sup>2</sup>University of the Sunshine Coast, Australia, Australia*

The research on working women's experience of the menopause and the impact this might have on their well-being, job performance and job satisfaction is sparse. The lack of evidence has been highlighted in the context of establishing the risk factors that contribute to adverse health outcomes of the menopause (Harlow et al., 1999) as well as increasing knowledge of women's life experiences in general (EU-OSHA, 2003). There is evidence that women remain increasingly active participants in the labour market as they get older. Their contribution is vital

to help develop sustainable economies; so greater understanding is required of how to support women more effectively throughout the menopause. This paper examines some of the work-related and individual difference characteristics that could impact on menopausal women's well-being, performance and job satisfaction.

The study used a cross-sectional design, employing an online survey to collect the data. The participants completed measures of performance, job satisfaction, depression, anxiety, stress, work climate, skill discretion, job autonomy, dispositional optimism, general self-efficacy, social support, menopause work environment, hours of sleep, amount of exercise, and demographic information. The data were subjected to descriptive and inferential analyses to facilitate an understanding of the relationships among the variables. The regression analyses tested five models to predict performance, job satisfaction, stress, depression, and anxiety.

The participants ( $N = 321$ ) were between 35 and 69 years old ( $M_{age} = 53.07$ ;  $SD = 5.22$ ) and were more likely to be married than not in a relationship. Just under one-half (45%) considered themselves to be peri-menopausal, and the other 55% identified themselves as post-menopausal. The regression analyses showed that work climate, dispositional optimism and support were predictors of performance and job satisfaction. However, skill discretion, self-efficacy and social support were less likely to impact significantly on anxiety, depression and stress.

The findings showed that menopausal women's individual characteristics (e.g., dispositional optimism, general self-efficacy) and work characteristics (e.g., social support) were related to better performance and higher job satisfaction. However, some of the individual and work characteristics that were assessed, such as self-efficacy and support, were less likely to improve their mental well-being. As menopausal women are going through 'a change' it might be fruitful to explore the extent to which the support offered, matches that which is needed to help them manage the biological and psychological changes that the menopause can bring.

#### **S45: Caring for Oneself as well as Others: Compassion, Wellbeing and Distress in Female Social Workers**

Gail Kinman, Louise Grant, Sarah Baker  
*University of Bedfordshire, Bedfordshire, UK*

Many studies indicate that 'helping' professionals find their work satisfying, but are at considerable risk of burnout. Providing compassionate care to service users who are experiencing personal difficulties and trauma can deplete the emotional resources of professionals and engender compassion fatigue and secondary trauma. There is evidence that women are at higher risk of compassion fatigue and tend to be less compassionate towards the self than men (Neff, 2003; Sprang et al. 2007). This might place them at greater risk when employed in the 'helping' professions. The potential of self-compassion (a positive self-attitude comprising self-kindness, common humanity and mindfulness) to protect the wellbeing of helping professionals has been highlighted (Neff, 2010). On the other hand, satisfaction gained from forging empathic connections with others might promote wellbeing and a sense of personal growth. This study examines associations between three aspects of compassion, compassion fatigue, compassion satisfaction and self-compassion, and emotional exhaustion, secondary trauma, mental health and personal growth in female social workers. As length of time in the job has been linked with perceptions of emotional demands by helping professionals, (Bolton, 2001) the effects of social workers' occupational tenure on compassion and wellbeing are also explored. Validated measures were completed via an online survey by 291 social workers with the majority (75%) having been qualified for at least 10 years.

Compassion fatigue was positively associated with emotional exhaustion and secondary trauma, whereas strong relationships were found between both compassion satisfaction and self-compassion and psychological wellbeing and personal growth. Women who had been social workers for longer tended to report less compassion fatigue and secondary trauma. They also typically reported a higher level of self-compassion overall, particularly more self-kindness and mindfulness, than those with less experience. Hierarchical regression analysis, controlling for job experience, found that between 28 and 51% of variance in the outcomes were explained by the compassion variables with a different pattern of predictors observed for each outcome. Some evidence was found that self-compassion moderated the effects of compassion fatigue on wellbeing outcomes. The findings of this study highlight the importance of examining different facets of compassion in employees in the helping professions. The importance of self-compassion for the wellbeing of helping professionals was also highlighted. Interventions are required to increase self-compassion in helping professionals and help them identify and manage compassion fatigue at an early stage.

#### **S46: Recovery and Work-Life Balance for Women.**

Almuth McDowall

*Birkbeck, University of London, London, UK*

Work-life balance (WLB) research has been criticised for lacking in diversity and the need to address issues which go beyond traditional family structures and professional samples has been emphasised. WLB is not a fixed outcome or 'destination', but an ongoing personal process and subject to change in circumstances and perception as is the journey of recovery (Laudet, 2007) which is defined as remaining abstinent from alcohol and/or drugs and engaging in a twelve-step programme. Recovery requires significant lifestyle changes, as abstinence management involves attending regular group meetings. This requires a significant time investment which can impinge on the personal resources available for other activities. The present study explores the lived WLB experiences of six working mothers who are in recovery. More specifically, it investigates the interaction between work, family and recovery through an idiographic approach.

Data were collected through a series of open-ended questions within semi-structured interviews, which allowed participants to give meaning to their subjective experiences. The interview transcripts were subjected to Interpretative phenomenological analysis (IPA). Six superordinate themes were identified: then and now; chaos, control and craving normality; guilt, shame and perfectionism; navigating a new world; identity as a mother; and recovery as another domain. Women generally described a tri-partite juggling act between work, family and recovery. The results revealed that, in order to be effective, commitment to recovery has to take precedence over all other aspects of life. It takes on the form of a separate entity or 'being' which is coloured by strong emotions including guilt and shame. On the other hand, however, recovery acts as a helper to enrich the lives of the participants, promoting healing and self-growth, strengthening the self-concept and enhancing self-care.

Theoretical and practical implications of the findings are discussed in terms of the importance of support, the necessity to accommodate working arrangements and family demands, and the promotion of a sense of belonging in society, as most of the women interviewed managed their recovery in secrecy.

## **Symposium: Stress at Work 2015 - Part 1: Concepts, Results, Practical Implications of (Inter)national Collaborations**

Chair: Nicola Jacobshagen

*University of Bern, Bern, Switzerland*

Stress at work has been researched for quite some time, but we are still in need to understand results of newer concepts, national and international differences with regard to different findings, and practical implications for these results. This symposium focuses on three aspects: Resources against stressful working conditions, the important meaning and consequences of social stressors at work, and practical implications. We start with appreciation as an important resource presenting studies from three countries. In the second part we will discuss with several perspectives social stressors: Conflicts in a hospital setting, the importance of deteriorations, and consequences of social stressors on well-being with a meta-analytic approach. In the third part we explore practical implications: The use of electronic devices after work and outcome of leadership trainings. Methods employed are structural equation modeling, multi-level-analyses, meta-analyses, and classical regression analyses. Thirteen Universities/Institutes from six different countries (Switzerland, Germany, Austria, USA, Netherlands, and Sweden) contribute to this symposium. Part 1 of the symposium includes three presentations.

### **S47: Why Appreciation at Work is important: Results from Two Countries**

Nicola Jacobshagen<sup>1</sup>, Lisa Björk<sup>2</sup>, Benjamin Ulrich<sup>1</sup>, Rebecca Lanz<sup>1</sup>, Norbert K. Semmer<sup>1,3</sup>

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Appreciation is assumed to be a very important resource in the stress context. The aim with this introductory paper is to focus on the results in two countries: Switzerland and Sweden. The scale appreciation developed at the University of Bern for the past seven years was used in these studies. The scale consists of 15 items (three subscales: appreciation by supervisors, appreciation by work colleagues, and appreciation by clients). Data used were several longitudinal studies (N=292; N=134) from different organisations in Switzerland and another study (N=296) regarding management function while undergoing organisational change (Sweden).

The results show that appreciation is a resource in its own right (main effects), and - with regard to interaction effects - appreciation functions as moderator as well as a mediator, but always depending on the stressors and well-being parameters that were researched. Also, the results for managers from Sweden indicate that the effect for managers, who had undergone reorganisation, was alleviated if the managers were appreciated. The results indicate that appreciation is an important resource in its own right at work (besides control and social support), and will be discussed briefly. Also the relationships to the other papers in this symposium will be shown.

### **S48: Is Appreciation More than Mere Social Support? A Diary Study.**

Isabel B. Pfister<sup>1</sup>, Laurenz L. Meier<sup>2</sup>, Nicola Jacobshagen<sup>1</sup>, Désirée Stocker<sup>1</sup>, Wolfgang Kälin<sup>1</sup>, Norbert K. Semmer<sup>1</sup>

<sup>1</sup>*University of Berne, Berne, Switzerland*, <sup>2</sup>*University of Fribourg, Fribourg, Switzerland*

Objectives: The effort-reward model by Siegrist (1996, 2002) postulates that an imbalance between efforts invested and rewards received increases the risk of impaired well-being and ill health. Appreciation is seen as one of the reward factors. Empirical evidence indicates that

appreciation may be the most important of the rewards (van Vegchel, de Jonge, Bakker, & Schaufeli, 2002). It is therefore plausible to assume that appreciation is especially important for well-being. In a diary study we analysed how appreciation received during the day influenced well-being at the end of the work day. Moreover, we analysed if appreciation is more than mere social support and how this relationship presents itself whenever people are confronted with different stressors at work. Also of interest to us was the question, which source of appreciation was the most important one (supervisors, colleagues or clients).

**Methods:** Data were gathered with an online diary survey for 9 days. 291 Swiss employees from six Swiss organizations participated in the study. Participants were between 20 and 64 years old; the average age was 45.16 (SD = 10.27); 52% were male.

**Results:** Because of the hierarchical structure of the data (days nested in persons), we performed multilevel analyses. We found that appreciation experienced during the day indeed could predict well-being after work, but only on days where people also experienced higher levels of stressors. These results were found consistently across three different stressors: Illegitimate tasks, social stressors and task related stressors. In other words, on days where participants experienced appreciation as well as stress, appreciation had a positive correlation with well-being over and above mere positive events, compared to days where people experienced less stress. The other aspect we analysed in this study was the question about the importance of the different sources of appreciation. Colleagues were found to give more appreciation to their colleagues in general, but only appreciation from supervisors had a significant correlation with well-being. Appreciation from colleagues or clients did not yield any significant result.

**Conclusion:** These results underline the importance of appreciation by supervisors for employees' well-being and its distinction from other forms of positive social interactions in the work context. Overall, these findings imply that it is worth building an organizational culture based on appreciation at work.

#### **S49: Conflict with Supervisor, Stress, and Resigned Attitude: Lower(ed) Job Resources as Mediator**

Achim Elfering<sup>1,2</sup>, Christin Gerhardt<sup>1,2</sup>, Simone Grebner<sup>1</sup>, Urs Müller<sup>3</sup>

<sup>1</sup>University of Bern, Bern, Switzerland, <sup>2</sup>National Centre of Competence in Research, Affective Sciences, University of Geneva, CISA, Geneva, Switzerland, <sup>3</sup>Health Care Research Institute AG, Zurich, Switzerland

**Objectives:** Conservation of resources theory focuses on loss of resources as detrimental process in work strain. In hospital work more frequent conflicts with supervisors are tested to predict lower social support, lower participation possibilities, and lower appreciation. All three resources are expected to predict occupational strain and lower job satisfaction, lower commitment with the organisation and higher resigned attitude towards the job (job attitudes).

**Methods:** The sample included 1073 employees from 14 Swiss hospitals. The largest occupational group was nurses (n = 604). Other occupational groups were physicians (n = 81), medical therapists (n = 135), and technical and administrative staff (n = 253). Of the total sample, 83.1 per cent were female and 38.9 per cent worked full-time. Median age was 40 years and median tenure was 8 years. Constructs were assessed by self-report questionnaires. Structural equation modelling (SEM) was used to test mediation.

**Results:** SEM confirmed the negative association of conflict with supervisors and job resources. Job resources were positively related with attitudes, and test of indirect paths with resources as

link between conflicts with supervisors and job attitudes were significant for appreciation in nurses, physicians, other therapists and technical employees. For physicians, social support showed a significant indirect path as link between conflicts with supervisors and job attitudes; while in nurses the indirect path included participation.

Conclusions: Conflicts with supervisors are likely to reduce job resources. Work design in hospitals must address social work conditions and leadership.

### **Symposium: Dealing with Psychological Trauma in the Workplace**

Chair: Noreen Tehrani

*Crisis, Disaster & Trauma Section BPS, Leicester, UK*

This symposia looks at psychological trauma from an Occupational Health Psychology perspective. The symposia involves three presentations, the first two are linked with an emphasis on the organisational duty of care to protect the psychological wellbeing of workers in organisation where there is a known risk of having to deal with psychologically demanding situations and circumstances. The third paper moves to examine the world of the trauma therapist where the exposure to trauma is at second hand but may resonate with life events and beliefs of the therapist.

This symposia will provides a brief introduction to the individual and organisational experience of traumatic events and experiences. Within the papers there will be examples of how trauma can be managed and employees transform their trauma into personal growth. The symposia would be of interest to Occupational Health Psychologists who work in organisations where the workers are directly exposed to trauma including: emergency services, health services, construction, farming and fisheries, banks and building societies or where the traumatic exposure is secondary such as: counsellors, lawyers, news reporters, teachers and social workers. The presenters in this symposia are both highly experienced trauma psychologists working with primary and secondary victims of trauma.

### **S50: The Case for Psychological Surveillance in the Workplace**

Noreen Tehrani

*Noreen Tehrani Associates, London, UK*

Health surveillance and screening are a familiar part of the role of an occupational health practitioner and involves a systematic approach to the identification of early signs of work-related ill-health or injury. The UK Management of Health and Safety at Work (1999) legislation provides the framework with a specific reference to the need for surveillance. However, this surveillance is rarely applied to psychological risks.

There is a need for OH psychologists to consider engaging in the surveillance of workers involved in roles where it is known that there are psychosocial workplace hazards which cause harm to workers. ACAS (2012) have stated that the surveillance of psychosocial hazards should be treated with the same importance and urgency as physical surveillance in order to support organisations to meet their duty of care to their workforce.

Emergency services deal with significant levels of highly distressing events as a normal part of their work. These organisations are keen to ensure that they have robust systems to assist in the selection, surveillance and support of personnel in dealing with the demands of the role. To be operationally viable the screening and surveillance programme needs to be easy to operate,

accessible and not too costly in terms of financial and other resources. There is also a need to ensure that all personal and organisational data is protected to the rigorous standards required. This paper looks at the development and introduction of online psychological screening in a number of emergency services including:

- Role risk assessments
- Personal risk assessments
- The screening process
- Dealing with the outcomes
  - Fit notes
  - Follow up structured interviews
  - Psychological Assessments
- Management information

Some early results of the screening and surveillance programme will be presented.

### **S51: The Development of an Organisationally Informed Trauma Therapy Programme**

Noreen Tehrani

*Noreen Tehrani Associates, London, UK*

People working in emergency services face a range of risks during the course of their work. In the police this may include dealing with murders, assaults, suicides, road deaths, as well as the impact of violence and abuse affecting children and vulnerable people. Fire fighters and paramedics also face dealing with situations that expose them to distress and danger where the lives of members of the public and of themselves may be in danger. The risks of traumatic exposures vary according to the different roles and tasks being undertaken. Psychological risk assessment, screening and surveillance has provided a basis for Emergency Services to manage the risk of psychological harm by identifying the most demanding roles, and providing a regular opportunity to monitor the levels of psychological wellbeing of people in high risk roles.

Whilst a screening approach can reduce the likelihood of officers and staff being exposed to unacceptable levels of traumatic risk, it is not possible to eliminate all the risks involved in work. In addition, most people experience personal traumas at some point in their lifetime. These may include early life abuse and neglect, accidents, traumatic bereavements, life-threatening illness and relationship difficulties. What is required is an approach that can deal with work-related and personal trauma reactions.

The need is to provide effective psychological assessments and interventions to deal with responses to a wide range of traumatic events. The expertise required to deliver appropriate trauma therapy is not always available quickly enough through the NHS. Although Employee Assistance Programmes are good at providing confidential counselling support for employees they are less effective and responsive in the provision of trauma support particularly when the trauma is work related.

An organisationally informed trauma therapy programme has been developed and implements within a number of emergency services. This required the following processes: (i) identifying an appropriate trauma therapy model; (ii) developing organisational systems for delivering the therapy; (iii) selecting appropriate trauma therapists; (iv) establishing standards; and (v) monitoring and evaluations the programme. Nine therapists were selected to work within the programme. The pilot programme has run for two years and has provided trauma therapy for forty six employees.



Qualitative and quantitative measures have been used to evaluate the programme. The qualitative data includes measurements of perceived changes in ability to work effectively, improved relationships, and increased understanding of symptoms and satisfaction with the programme. The quantitative results show a significant improvement in symptoms of anxiety, depression, burnout and traumatic stress as well as improved lifestyle (eating, sleeping, alcohol, socialising) and resilience levels as measured by their sense of coherence scores.

Whilst the programme is still relatively new the results are encouraging and show that taking an organisational approach where the therapeutic intervention is based on an Occupation Health Psychology framework the programme meets the needs of the employees, organisation and therapists.

### **S52: The Impact of Working Therapeutically with Psychological Trauma: a Narrative-based Poetic Examination of Personal Meaning**

Tina Buxton

*University of Chester, Chester, UK*

Those working with trauma survivors by definition are exposed to traumatic material. Although this may be the case for many, therapeutic work involves exposure of a different kind. A therapist experiences genuine affect for their clients and enters into a deeply empathetic bond (Hunter, 2012). To attune to others in this way only to bear witness to their pain, leaves therapists vulnerable in ways that those working without this bond, are not. Many effects on therapists are proposed in the literature. Subsequent traumatisation of the therapist (Boscarino, Adams & Figley, 2010) features widely with various concepts proposed to account for this (Figley, 1995:2002; McCann & Pearlman, 1990). Others view carrying out trauma therapy as having positive outcomes (Joseph, 2009; Hernandez, Gansei & Engstrom, 2007). Lack of conceptual agreement and inconsistency of effect produces an ambiguous view of the effects of working therapeutically with trauma (Baird & Kracen, 2006). Additionally much of this work is quantitative in nature (Canfield, 2008) as such limited focus is given to the impact the work has through the meaning created by the therapists themselves.

This research views the effects on therapists of working with trauma as most clearly accessed from individuals experience. A qualitative approach utilising a narrative methodology (Emerson and Frosh 2009) was utilised in this research as it is familiar in form with the work therapists perform. Three therapists who work with psychological trauma were interviewed twice. To further allow the participants to tell their story in their words, a free association interview method (Hollway & Jefferson, 2000) together with a form of linguistic structural analysis (Gee, 1991) was used to create poetic representations of the stories. These poems provide a representation of therapist's personal meanings of working with trauma.

It is evident that each of the therapists draws very different meaning from their work with trauma. Whilst there is evidence in these stories of the effects proposed in the literature these were not consistently found in each of the poems presented. One therapist is motivated by her historical abuse and understanding this through helping others is an integral part of the meaning drawn from working with trauma. Another struggles with retaining belief there is good in the world. She feels warped and isolated by the online work she does with insidious effects. The third therapist told a very different story of personal growth, hope and enlightenment through her work.

This research indicates the operation and experience of the effects of working therapeutically with psychological trauma are unique to the context, and therapist themselves. There is no uniformity to the way in which the work affects those in this study. The meaning individuals



draw from this is dependent on their experiences, personalities, beliefs and interaction with the nature of their particular work and the organisational environment. The implications of the findings for the therapeutic working environment and the wider organisation will be highlighted.

### **Symposium: On- and Off-job Activities: The Key to Successful Recovery**

Chair: Kimberley Breevaart

*Free University, Amsterdam, The Netherlands*

State of the Art. According to the effort-recovery model, recovery from work is important to replenish resources that were lost during a day's work. If employees do not properly recover from work, this will negatively affect employees' well-being and performance. Recovery can take place during and after work. The former is also referred to as internal recovery (e.g., micro breaks), whereas the latter is called external recovery (e.g., leisure activities).

New Perspective/Contribution. This symposium includes four empirical contributions that shed a new light on how activities during and after work contribute to employees' well-being and performance. The studies highlight the importance of both types of recovery by examining how different types of social media use at work, time spent on leisure activities, motivation for off-job activities, and energy gained by activities outside of work are related to employee engagement, burnout, and performance.

Conclusion and Implications for Research/Practice. The four studies included in this symposium add to our knowledge on internal and external recovery from work. Specifically, employees are more engaged and more creative when they are able to send private emails during work. Furthermore, fatigued employees undermine their own recovery process by engaging in off-job activities that are not intrinsically motivating to them. Also, when employees undertake activities after work that are energizing, they are better able to deal with their workload the next day.

### **S53: Too Tired to Recover: A Multi-Level Study on the Role of Motivation during Off-Job Activities**

Daantje Derks<sup>1</sup>, Kimberley Breevaart<sup>2</sup>, Arnold Bakker<sup>1</sup>, Gera Noordzij<sup>1</sup>

<sup>1</sup>*Erasmus University, Rotterdam, The Netherlands*, <sup>2</sup>*Free University, Amsterdam, The Netherlands*

Consistent with effort-recovery theory, ample empirical evidence has shown that in order to protect well-being, employees need to recover after work to replenish the resources depleted during the workday. However, there is less consensus in the literature about what the key to successful recovery is. What off-job activities are important for recovery? How much time do employees need to spend on these activities? Is the effect of the off-job activities on recovery stable over time? In this study we examined the impact of intrinsic motivation for off-job activities on recovery.

In this multi-level study, we adopted a longitudinal perspective aimed at answering two important questions regarding recovery. First, we investigated whether baseline fatigue predicts fatigue and burnout over the weeks through lack of recovery (loss spiral). Second, we examined whether employees who were already fatigued at T1 undermine their own recovery process by undertaking less intrinsically motivating off-job activities.

To test our hypotheses, we conducted a multi-level study including a baseline measurement (T1), as well as two day-level measurements and one week-level measurement during three

successive weeks. We asked participants on two random evenings in the week to report the off-job activity they spent the most of their time on and how intrinsically motivated they were to undertake this activity. Additionally on every Friday afternoon we asked how tired they were, both un-contextualized (fatigue) and work-related (burnout). In total 87 employees (52% female, mean age 41.79) participated. Most participants (74%) filled out all nine questionnaires.

Multilevel analyses using the MLwiN program showed overall support for our hypotheses. Initially fatigued employees were unable to recover sufficiently, which resulted in higher levels of fatigue and burnout over the weeks. Taking a closer look at the underlying process, we showed that fatigued employees were less able to undertake the off-job activities they were intrinsically motivated for, which indeed undermined their recovery process. In sum, we found that fatigued employees initiated less intrinsically motivated off-job activities, which resulted in poor self-reported recovery and increased fatigue and burnout over the weeks.

A unique contribution of this study is that we show that intrinsic motivation for off-job activities plays an important role in the recovery process. Furthermore, we identified an important risk factor for burnout, namely incapability to initiate off-job activities one really likes and that are accompanied by the experience of freedom and autonomy.

#### **S54: Only go to the Gym when it is Energizing? Energy Gained from Off-Job Activities Helps Employees with their Daily Workload**

Kimberley Breevaart<sup>2</sup>, Arnold Bakker<sup>1</sup>, Daantje Derks<sup>1</sup>, Tinka van Vuuren<sup>3</sup>

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**Introduction:** What people do after work is important for how they feel and perform the next day at work. That is, to recover from work-related effort, employees need to engage in activities that appeal to other energetic resources than those utilized at work. Yet, findings on how off-job activities are related to employee well-being the next day are not clear-cut. The present study aims to make two contributions to the literature. First, we investigate whether resources from the home domain spill over to the work domain and boost employees' work engagement on days that employees' workload is high. To test this, we integrate research on recovery with JD-R theory, which brings us to the second contribution of our study. In an attempt to shed more light on how off-job activities promote daily well-being, we argue that it is important to look at the amount of energy that employees gain from these off-job activities rather than the number of hours spent on these activities or the type of activity. Also, most recovery researchers have thus far focused on how off-job activities affect employee well-being (e.g., fatigue, vigor, depression) directly. Taking a different perspective, we examine whether employees may use of the energy gained from their off-job activities to handle the workload they encounter in their work, and therefore become more engaged in their work.

**Method:** Our participants were 39 employees from three different primary schools in the Netherlands. We asked them to fill out a daily diary questionnaire at the end of the workday for a period of two weeks. They reported the amount of energy gained from their off-job activities (e.g., social activities, physical activities, household activities) the previous night and their workload and work engagement of that day. We used Mplus to test our interaction hypothesis stating that energy gained by off-job activities the previous day moderates the relationship between daily workload and work engagement. Specifically, the relationship between day-level workload and work engagement will be stronger when energy gained by off-job activities the previous day is high (vs. low).

Results: In line with our central hypothesis, energy gained by physical and social activities helped employees to deal with their workload the next day. Consequently, employees were more engaged on these days.

Contribution & Implications: This study is one of the first to look at how recovery from work during evening hours helps employees to deal with their job demands the next day. Moreover, this study is unique in its focus on energy gained from off-job activities. Specifically, we showed that employees recover best when they gain energy from physical and social activities during evening hours. This energy helps them to cope with their workload the next day, which allows them to become more engaged in their work.

### **S55: Recovery and Social Media Use at Work: Gaining or Draining Personal Resources?**

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It has been estimated that employees devote up to two hours of daily working time to personal online activities such as reading and writing private emails, instant messaging or social networking (Vitak, Crouse, & LaRose, 2011). Social media use is usually seen as counterproductive work behavior (e.g., Lim & Teo, 2005). However, it may also be considered a micro-break, as it provides employees with a possibility to temporally escape from stress, replenish mental resources and regulate work demands (Lim & Chen, 2009; Trougakos & Hideg, 2009). After a social media break, employees may feel energized, better able to concentrate and dedicated. We hypothesize: social media use at work is associated with higher work engagement and creativity. We expect that social media use at work is associated with a better work life balance as people use social media to stay connected with family and to take care of personal issues during working time (Whiting & Williams, 2013).

The sample consisted of 295 German white collar workers. Mean age of the respondents was 33.8 years and 50% were female. Employees responded to digital hourly surveys across one work day (5.4 times on average), resulting in a total of 1587 hourly measurements. Employees rated their social media use, work engagement (Utrecht Work Engagement Scale, Schaufeli et al., 2006), work-home balance (inspired by the Survey Work-home Interaction - Nijmegen; Geurts et al., 2005) and creativity (George & Zhou, 2001). Hierarchical linear modeling indicated that all types of social media use were associated with lower levels of work engagement. No association was found with creativity. However, analyses showed lagged effects of social media use on work engagement and creativity one hour later, particularly emailing positively predicted work engagement and creativity. Further, social media use positively predicted work-home balance.

Social media use showed negative relations with work engagement and creativity; but at the same time, emailing increased work engagement and creativity in the following hour. It might be that writing personal emails enable employees to finish private tasks. Further, social media use at work may enable working people to effectively combine work and private life and support work-home balance. While most studies on social media use at work take a rather negative viewpoint, emphasizing its negative impact, our study illustrates the need for a more balanced perspective.

## **S56: Long-term Leisure Activity Profiles, Recovery Experiences and Work Performance**

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<sup>3</sup>*University of Maribor, Maribor, Slovenia*

**Aim:** The first aim of the present longitudinal study was to identify leisure activity profiles among working adults. The second aim was to examine how these profiles are related to recovery experiences and work performance. In other words, we were interested to see if individuals tend to engage in characteristic combinations of various off-job activities - physical, nature, social, cultural or creative - and how these leisure activity profiles are associated with recovery experiences (mastery, detachment, control, relaxation) and work performance (accomplishment at work, contextual performance, creativity at work).

**Method:** The long-term leisure activity profiles and their relation to recovery experiences and work performance were investigated in a sample of 831 Finnish employees from 12 different organizations. Of these participants 59% were women and 47% belonged to age group of 40-54. We had two measurement points with one year in between (2013 and 2014). We used latent profile analysis (LPA) to investigate whether there existed homogeneous subpopulations in our data which differed from each other in leisure activity preferences over time. To investigate the differences between the leisure activity profiles in recovery experiences and work performance, we used analysis of covariance for repeated measures, where gender was set as a covariate and time as a repeated measure.

**Results:** Based on LPA we identified four distinct profiles, which were stable across one year. The first profile, 46% (n = 379), consisted of participants who spent their free time on physical exercises, nature and social activities but not on creative activities. The second profile, 23% (n = 192), consisted of participants who were high in all studied activities but especially they differed from others in their high investment to creative activities. The third profile, 17% (n = 141), consisted of participants who spent especially little free time on social, cultural and creative activities. The fourth profile, 14% (n = 119) consisted of participants who spent especially little free time on physical exercising. Of these profiles, the second showed highest recovery experiences (particularly mastery) as well as work performance (particularly creativity) whereas the differences in these dimensions were less pronounced between the other three profiles.

**Conclusion:** Participants who invest their time in many different off-job activities also report highest work performance. According to scarcity approach, engagement in many activities might lead to a depletion of resources for work. Instead, our results seem to lend support for the expansion approach according to which activities which are voluntary and desirable do not deplete but replenish our resources. Our main result also raises the question whether there are common third factors (e.g., personality) explaining this relationship between high investment in free time activities and good work performance.

## **Symposium: The Person-Oriented Approach to Job Burnout**

Chair: Anne Mäkikangas<sup>1</sup>

Discussant: Magnus Sverke<sup>2</sup>

<sup>1</sup>*University of Jyväskylä, Jyväskylä, Finland,* <sup>2</sup>*Stockholm University, Stockholm, Sweden*

The variable-oriented approach (i.e., variables are taken as the unit of the analysis) has dominated occupational health psychology research. A person-oriented perspective that considers the individual as the unit of analysis (Bergman & Lundh, 2015; Bergman, Magnusson, & El-Khouri, 2003) has been so far only rarely utilized, although it has potential to bring intra-individual experiences into the spotlight thereby offering multifaceted and applicable knowledge.

The aim of this symposium is to illustrate the person-oriented approach via four contributions which all apply this approach to job burnout. In addition to addressing the fundamental issue of intra-individual patterns of burnout symptoms and trajectories, the symposium focuses on understanding the within-person differences in antecedents of job burnout. First, Anne Mäkikangas presents the results of a systematic literature review that identified, categorized and evaluated 24 empirical studies that adopted a person-oriented approach to burnout. Second, Ulla Kinnunen and her colleagues use a longitudinal design to examine work-related rumination patterns and their linkages with burnout symptoms as well as sleeping problems. Third, Taru Feldt and colleagues explore how employees' profiles of ethical dilemmas relate to burnout and turnover intentions. The fourth study by Sanna Kinnunen and her colleagues, examines the effectiveness of a mindfulness-, acceptance-, and value-based intervention for burnout by studying burnout-mindfulness profiles. All these studies show that the person-oriented perspective on job burnout provides an important and necessary complement to the variable-oriented studies.

### **S57: The Person-oriented Approach to Burnout: A Systematic Review**

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<sup>1</sup>*University of Jyväskylä, Jyväskylä, Finland*, <sup>2</sup>*University of Tampere, Tampere, Finland*

The variable-oriented approach has dominated empirical burnout research, but during the last 10 years a person-oriented approach to burnout has also become common. The aim of this systematic literature review was to identify, categorize and evaluate the empirical research to date that has adopted a person-oriented approach to burnout. The results of these studies were then compared with those generated by variable-oriented burnout research.

An electronic search of seven databases was conducted in Spring 2015. 470 publications were initially identified, 24 of which met the selection criteria. The reviewed articles were categorized into three groups based on their research target(s): 1) intra-individual patterns of burnout symptoms (i.e., types of burnout) (42%), 2) intra-individual development of burnout over time (i.e., burnout trajectories) (33%), and 3) patterns of well-being indicators within individuals (i.e., well-being types) (33%).

The typical burnout types and trajectories identified by person-oriented research were largely parallel with the information produced by variable-oriented research, but also brought out the heterogeneity of burnout experience by revealing atypical burnout and well-being types and individual developmental trajectories. The advantages taking a person-oriented approach, along with the challenges, are discussed. Based on the study designs, methodologies, and main findings of the reviewed studies, five avenues for future person-oriented burnout studies are proposed.

### **S58: Identifying Patterns of Work-Related Rumination and Their Links to Exhaustion, Reduced Professional Efficacy and Sleeping Problems across Two Years**

Ulla Kinnunen<sup>1</sup>, Taru Feldt<sup>2</sup>, Jessica de Bloom<sup>1</sup>

<sup>1</sup>*University of Tampere, Tampere, Finland*, <sup>2</sup>*University of Jyväskylä, Jyväskylä, Finland*

Due to the prolonged psycho-physiological activation, rumination is considered a risk factor for recovery, health, and well-being. It has been suggested that three types of rumination can be distinguished: affective rumination, problem-solving pondering, and lack of psychological detachment from work (Querstet & Cropley, 2012). The main aim of the present longitudinal study was to examine which kind of rumination patterns (in terms of affective rumination, problem-solving pondering and lack of detachment from work during off-job time) can be identified among employees across a two-year period. In addition, we examined the patterns' relations to exhaustion, reduced professional efficacy and sleeping problems.

The study was conducted in three phases - spring 2013 (T1), 2014 (T2) and 2015 (T3) - among Finnish employees (N = 664) who filled in an electronic questionnaire sent to their work e-mail addresses. The response rate at baseline was 43%. Of the participants, 58% were women, and average age was 48 years. The participants worked most typically (62%) as higher white-collar workers. The patterns, that is, subgroups of employees with unique and distinctive patterns of mean-level stability and/or change in rumination across time were identified using latent profile analysis (LPA).

Preliminary analyses with LPA revealed five stable patterns of work-related rumination across time: 1) no rumination (n = 81), 2) reasonably good detachment from work (n = 228), 3) high problem-solving pondering combined with lack of detachment (n = 216), 4) high affective rumination (n = 54), and 5) high problem-solving pondering (n = 85). Patterns of rumination differed in the outcomes examined. Employees in the pattern of no rumination (pattern 1) had least symptoms of burnout, and sleeping problems, whereas those with levels of high affective rumination (pattern 4) scored highest in exhaustion, reduced professional efficacy and sleeping problems. Pattern 2 seemed to score near the average in all outcomes. Employees in pattern 3 (high problem-solving pondering combined with poor detachment) were at a risk of exhaustion and sleeping problems. Participants with high problem-solving pondering (pattern 5) had highest levels of professional efficacy.

Our results suggest that employees can be categorized according to their characteristic pattern of work-related rumination. These patterns remain stable across time. Affective work-related rumination seems to be most detrimental to an individual's ability to recover from work, but also problem-solving pondering together with difficulties to detach from work increases the risk for burnout.

### **S59: Identifying Patterns of Ethical Dilemmas and Their Associations with Job Burnout and Turnover Intention in a Public Sector Organization**

Taru Feldt, Pia Pihlajasaari, Joonas Muotka  
*University of Jyväskylä, Jyväskylä, Finland*

The aim of this study was to identify profiles of employees' ethical dilemmas and to examine how job burnout and turnover intentions differ in these profiles. The study was conducted among public sector employees working in a city organization (n = 2470). The participants filled in an electronic questionnaire sent to their work e-mail addresses. Of the respondents, 85% were women. The participants worked in four service units: 1) administrative services (4%), urban design and business activities (11%), education and culture (24%), and social affairs and health (61%). Ethical dilemmas were measured with two questions concerning the prevalence of how often the respondents faced 1) uncertainty about the ethical policy of organization (type A dilemma) and 2) value conflicts in work (type B dilemma) (Nash, 1993). Job burnout was measured with the 9-item Bergen Burnout Indicator (Salmela-Aro et al., 2011) and turnover intention by a single question.

Latent Profile Analysis calculated by Mplus program revealed four patterns of ethical dilemmas: 1) both dilemmas faced rarely (30 %); 2) both dilemmas faced often (20 %); 3) uncertainty faced often, value conflict rarely (22 %); and 4) uncertainty faced fairly often, value conflict rarely (28 %). The results showed that those employees who faced both type of dilemmas often (pattern 2) reported more burnout and turnover intentions than employees in other dilemma patterns.

Our results suggest that employees can be categorized according to their characteristic pattern of work-related dilemmas. The results further indicate that frequent uncertainty about the ethical practices in the organization and pressure to act against rules, norms and own values are a risk for employees' job burnout and turnover intention.

### **S60: Individual Differences in Intervention Outcomes among Participants of Mindfulness, Acceptance, and Value-Based Intervention for Burnout**

Sanna Kinnunen, Anne Puolakanaho, Asko Tolvanen, Anne Mäkikangas, Raimo Lappalainen  
*University of Jyväskylä, Jyväskylä, Finland*

**Background:** There is limited knowledge of individual differences in intervention outcomes among participants of interventions for work well-being. Furthermore, little is known of the factors associated to these differences.

**Aims:** Muupu-research (randomized control trial,  $n = 109+109$ ) aims to examine the effectiveness of 8-week group and web intervention based on mindfulness programs (MBSR, MBCT) and value-based methods (from ACT) to the recovery from work burnout. This study explores individual profiles based on burnout and mindfulness skills. In addition, it investigates if and how the profiles differ in terms of between-session practices and learning experiences during the intervention.

**Methods:** This longitudinal study (pre-, post-, and 6-month f-up measurements) utilizes mixture modeling technique and uses data from intervention participants ( $n = 105$ ).

**Results:** Six distinctive profiles of burnout and mindfulness skills were found, and they differed in terms of level and change. The profiles differed in learning experiences during the intervention and the amount of mindfulness and value practices after the intervention.

**Implications:** Knowledge of individual differences in intervention outcomes and experiences can be used to develop interventions to better meet the needs of differing target groups.

### **Symposium: Stress at Work 2015 - Part 2: Concepts, Results, Practical Implications of (Inter)national Collaborations**

Chair: Nicola Jacobshagen

*University of Bern, Bern, Switzerland*

Stress at work has been researched for quite some time, but we are still in need to understand results of newer concepts, national and international differences with regard to different findings, and practical implications for these results. This symposium focuses on three aspects: Resources against stressful working conditions, the important meaning and consequences of social stressors at work, and practical implications. We start with appreciation as an important resource presenting studies from three countries. In the second part we will discuss with several perspectives social stressors: Conflicts in a hospital setting, the importance of deteriorations, and consequences of social stressors on well-being with a meta-analytic approach. In the third part we explore practical implications: The use of electronic devices after work and outcome of leadership trainings. Methods employed are structural equation modeling, multi-level-analyses, meta-analyses, and classical regression analyses. Thirteen Universities/Institutes from six different countries (Switzerland, Germany, Austria, USA, Netherlands, and Sweden) contribute to this symposium. Part 2 of the symposium includes four presentations.



## **S61: Do Deteriorations in Work Conditions Have Stronger Effects Than Equivalent Improvements? Results from Two Longitudinal Studies**

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**Objective:** Occupational health research is strongly concerned about how work conditions affect employee's health. We are interested in whether and how changes in job stressors and job resources impact well-being, assuming that a deterioration in working conditions (i.e., increase of stressors, decrease of resources) has negative effects while an improvement in work conditions (i.e., decrease of stressors, increase of resources) has positive effects. According to the conservation of resources theory (Hobfoll, 1989) as well as the idea of loss aversion (Tversky & Kahneman, 1974), a deterioration of one's work conditions should be more salient and impactful than an improvement. However, previous research has largely treated improvements in work conditions as if they had as large an impact on well-being as do equivalent deteriorations. As a result, our understanding of the effect of changes in work conditions is limited and effects of changes might be over- or underestimated. To advance our knowledge on the impact of changes of work conditions, we examined whether deteriorations in work conditions (increase of stressors, decrease of resources) have stronger effects on employee's well-being than equivalent improvements (decrease of stressors, increase of resources).

**Method:** Using data from two longitudinal studies (Study 1: 5 waves with 2-month intervals, N = 663; Study 2: 2 waves with 1-year interval, N = 1,895), we examined the effect of changes of job stressors (time pressure, social stressors, and organizational constraints) and job resources (job control, interactional justice) on well-being (emotional exhaustion, depression, sleep problems, and job satisfaction).

**Results:** In general, the findings support the idea of the primacy of loss, showing that increases in job stressors (especially social stressors and organizational constraints) and decreases in job resources (especially job control) have stronger impacts than decreases in stressors and increases in resources.

**Conclusions:** These results suggest that by not accounting for such differential effects, longitudinal studies on the relationship between work conditions and well-being may have underestimated the detrimental effects of workplace deteriorations and overestimated the beneficial effects of workplace improvements.

## **S62: Which Social Stressors do Affect Work-Related Well-Being More than Others? A Meta-Analytic Approach.**

Christin Gerhardt<sup>1,2</sup>, Nathal de Wijn<sup>3</sup>, Bernd Kersten<sup>1</sup>, Benjamin Ulrich<sup>1</sup>, Simone Grebner<sup>1</sup>, Norbert K. Semmer<sup>1,2</sup>, Achim Elfering<sup>1,2</sup>

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**Objectives:** For quite some time, social stressors have received comparatively little attention - although they are common (e.g., Bolger et al., 1989; Grebner et al., 2004). According to the European Survey of Working Conditions (Eurofound, 2012), between 13% and 15% of European workers reported adverse social behavior in 2010, which indicates disrespect or lack of appreciation as its social message and can be seen as offending the self (see the Stress-as-Offense-to-Self approach by Semmer et al., 2007, which emphasizes the often neglected threat



to the self by social stressors). Social stressors repeatedly predicted impaired well-being and health (e.g., Meier et al., 2009, 2013), including sleep and recovery (Elfering et al., 2015; Pereira & Elfering, 2014). Furthermore a recent meta-analysis found aggression by supervisors, co-workers and others to elicit adverse attitudinal, health-related, and behavioral outcomes (Hershcovis & Barling, 2010). Our aim was to conduct a meta-analysis including a broad range of social stressors and their relation to job satisfaction as an important indicator of work-related well-being. Because for intentionally social stressors no cognitive revaluation is possible (they are offending the self) we hypothesized that intended types of social stressors (e.g., bullying) can influence work-related well-being more than not necessarily intended social stressors (e.g., incivility). Furthermore we want to have a look on how physical against psychological and short-term against long-term social stressor affect job satisfaction.

**Methods:** Effect sizes were collected from 173 cross-sectional studies until 2012 with 68645 persons included. Samples had an average of 56.7% females and participants had a medium age of 36.89 years (SD=9.40). Employees were working at least 50% of a full time equivalent. We conducted a meta-analysis using the Meta-program by Schwarzer (1989).

**Results:** Beyond the moderate negative significant main effect between social stressors and job satisfaction we found an influence of the type of social stressor on the relationship. As predicted there were significant differences between more and less intentionally social stressors. For example bullying and harassment had a stronger relationship with job satisfaction than incivility, which can happen unintentionally. Some analysis are still pending.

**Conclusion:** Social stressors are related to impaired well-being and health. This relationship is moderated by the intent of social stressors. The results show the relevance of social stressors for well-being and health-related outcomes. Research should focus more strongly on social stressors and their consequences for well-being and health, and more longitudinal studies are needed.

### **S63: Work Related Mobile Devices Use After Work Hours Recovery and Health**

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**Objectives:** The mobile devices as smartphone and tablets has become the part of the everyday work life. Despite many benefits they have, there are also potential downsides related to their use (e.g. blurred boundaries between private and work life or impaired recovery). In the current study, first on a representative sample (N=2844) of Swiss employees, a new scale for measuring the stressful effects of work related mobile devices use after work hours was developed ("Work Related Mobile Devices Use as Stressor Scale" (WMD-US).

The scale contained two factors that measure: 1) stressful experience of work-related mobile use after work, and 2) permanent accessibility during leisure time. Second, we were interested to see if the use of mobile devices for company purposes during work-free time presents an additional work-related stressful factor, therefore a) the length of work related mobile device use after work and b) scores on new WMD-US scale, were used to predict the relevant outcomes: work-family conflict (WFC), recovery function (rumination, sleep quality), recovery status (exhaustion) and physical health (psychosomatic complaints). Effects were adjusted for task-related and social stressors, job resources (job control, social support and appreciation) and demographic variables (age, gender, percentage of employment and region). Additionally, the indirect effects from WMD-US through WFC or through rumination on health indicators were tested. Furthermore, by control of outcome data measured one-year before (n=1562) we predicted change in outcome variables.

**Methods:** The present analysis is based on a representative sample (N=2844), as well as two wave data on the participants were (n=1562) of Swiss employees. Data were analyzed by ANOVA, Factor Analysis, and Regression Analysis.

**Results:** The results showed that employees who use mobile devices for work after regular work hours experience higher levels of WFC and ruminate more often compared to non-users (ANCOVA). Moreover, hierarchical regression analysis on users showed that, the length of work-related mobile devices use after work hours, as well as the higher levels on WMD-US scale, significantly predicted WFC, rumination, and indicators of health, when adjusted for work-stressors, work-resources and demographic characteristics. The results remain significant when additionally adjusted for the last-year levels of outcome variables. Rumination and WFC significantly mediated the relationship between the WDM-US and health complaints in the longitudinal sample.

**Conclusions:** The results suggest that work related mobile devices use in private life, may be an additional stressor that is likely to increase WFC, and challenges recovery (rumination and sleep quality) and physical health (psychosomatic complaints). A mediation models with WFC and rumination as mediator variables were supported. Findings point towards work related smartphone use after work hours and expectations regarding its use that should be reconsidered. Clearer regulation regarding mobile devices use from the side of employers is needed. However, when possible the employees should set the limits and rules for their own use of mobile devices and accessibility.

#### **S64: Leading With(out) Emotions? - Effects of a Communication Leadership Training on Emotion Regulation Skills**

Belinda Seeg, Christina Habl, Astrid Schütz  
*University of Bamberg, Bamberg, Germany*

**Purpose:** Leaders need to communicate all day long. They set goals, discuss different problem solving possibilities, give feedback and sometimes need to deal with undesirable or conflict-prone employee behaviour. Conflicts with employees can be seen as negative affective events that evoke an emotional reaction which in turn leads to certain attitudes and behaviours (AET; Weiss & Cropanzano, 1996; Ohly & Schmitt, 2013). According to the "stress as offense to self"-perspective such emotionally charged situations promote stress and can threaten self-esteem (Semmer et al., 2007). Training leaders to effectively handle difficult leader-member situations may thus help to prevent serious disputes and have positive impact on the leaders' experience of him- or herself. Based on that reasoning, the present study investigated the effects of a communication training on leaders' self-perception (i.e., emotion regulation, self-esteem).

**Design/Methodology:** Participants were 26 leaders of a German medium-sized enterprise in the automotive sector who were randomly assigned to a communication training group (n = 13) or a waiting list control group (n = 13). The communication training lasted 1,5 days and included sessions on communication strategies, feedback and conflict solving behaviour. After the training, the participants' knowledge on the trained issues as well as on the self-reported interpersonal emotion regulation skills (SREIS; Brackett, 2004) and self-esteem (RSE; Rosenberg, 1965) were assessed.

**Results:** In an ANCOVA with group membership as the between-participants variable, we found a significant group effect on participants' knowledge of communication strategies and conflict solving behaviour ( $F(1,20)=5.46$ ,  $p < .05$ ;  $F(1,21)=6.93$ ,  $p < .05$ ). Furthermore, there was an effect on interpersonal emotion regulation skills ( $F(1,22)=5.43$ ,  $p < .05$ ). Leaders in the training

group had better knowledge on how to handle feedback and how to solve conflicts and also rated their interpersonal emotion regulation skills higher than did those in the waiting list control group. Differences with respect to self-esteem did not reach significance.

**Limitations:** The small and specific sample of this study does not allow for results to be generalized. Besides, the study design with self-reports and post-tests only does not make it possible to draw firm conclusions whether changes are actually attributable to the training and whether the effects are linked to long-term changes in actual workplace behaviour.

**Research/Practical Implications:** The study showed that communication-based leadership trainings can increase communication as well as perceived emotion regulation skills with the latter having the potential to help dealing with difficult leader-member interactions.

### **Symposium: Leading to Well-Being**

Chair: E. Kevin Kelloway

*Saint Mary's University, Halifax, Canada*

The papers in the symposium examine how leaders' contribute to the well-being of employees using diverse methodological approaches and theoretical perspectives. Several manuscripts examine leaders' contribution to employee wellbeing from different perspectives. Nielsen and Daniels use longitudinal data to examine the relationship between transformational leadership and individual use of sick time (i.e., sick absence). Burning and Turner also use longitudinal data to suggest that leadership affects group affective tone. Gilbert and Kelloway examine a potential mechanism behind these relationships, proposing and finding support for, a moderated mediation model suggesting that leadership is associated with greater recognition which, in turn, is associated with wellbeing. Consistent with a growing focus on workplace mental health, Dimoff and Kelloway develop a new measure - the Signs of Struggle - designed to allow leaders to identify and assist employees who are suffering from strain or mental ill-health. Dubreuil and Forest provide data from an intervention rooted in positive psychology and self-determination theory that shows positive effects on wellbeing.

### **S65: Does Your Leader Make You Sick? A Longitudinal Study of the Effects of Transformational Leadership on Sickness Absenteeism**

Karina Nielsen, Kevin Daniels

*University of East Anglia, Norwich, UK*

Sickness absenteeism is not only costly for organizations, but also for society and the individual. High sickness absence rates may lead to disability pension, exclusion from the labor market, a decrease in income for the individual; and problems with labor supply (OECD, 2010). A critical issue for organizations concerns how leaders and managers may or may not keep people well enough to work (Holtom, Mitchell, Lee, & Eberly, 2008). Previous research has demonstrated that leaders play a significant role in followers' sickness absenteeism patterns (Kuoppala, Lamminpää, Liira, & Vainio, 2008). Transformational leadership is one of the most widely researched forms of leadership (Kelloway, Turner, Barling, & Loughlin, 2012), but the effects of such leadership in a group context is less known (Nielsen & Daniels, 2012). Transformational leaders encourage their followers to perform "above and beyond the call of duty" (Bass & Riggio, 2006), and such behaviors may play a role in followers' sickness absenteeism levels. In the present study, we explore a direct relationship between group-level transformational leadership and followers' sickness absenteeism, and we test whether certain employees may be particularly affected by such behaviors.

Leaders and their employees were recruited from the Danish postal service. Survey data was collected over three time points with a 12 month follow-up in between them. Employees were asked to rate their immediate leaders' transformational leadership behaviors and their own sickness absenteeism and presenteeism levels over the past 12 months. In total, 155 followers completed the questionnaire at all three time points.

We found group-level transformational leadership in year 1 positively predicted sickness absenteeism in year 2, but not year 3. In examining conditions under which transformational leadership may be linked to higher levels of sickness absenteeism, we found that transformational leadership in year 1 moderated the link between presenteeism in year 1 and sickness absenteeism in year 3, such that followers high in presenteeism and working in groups with a transformational leader reported higher levels of sickness absenteeism.

Our results suggest a complex picture of the relationship between group-level transformational leadership and sickness absenteeism. Transformational leaders may promote self-sacrifice of certain followers by encouraging them to ignore their illnesses leading to increased risks of sickness absence in the long-term. Together, the results also indicate that the links between transformational leadership and organizationally desirable outcomes may not be as straightforward as much of the literature on transformational leadership to date suggests (Bass & Riggio, 2006). Examining the role of transformational leaders in followers' sickness absenteeism patterns offers an important way forward in providing guidance for how organizations may effectively deal with employees' health and well-being in healthy and vulnerable workers

### **S66: Leadership, Recognition and Well-Being: A Moderated Meditational Model**

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There are now considerable data linking leadership style, and in particular the transformational leadership style, to employee wellbeing (for a review see Kelloway & Barling, 2010). Yet, comparatively few investigations have focused on how transformational leaders influence employee wellbeing. In the current study we suggest that [a] transformational leaders engage in more recognition of employee efforts and that [b] recognition of employee efforts is associated with enhanced well-being. Although long acknowledged as an integral component of a healthy workplace, supervisory recognition of employee performance is under-researched with few studies exploring the effects of recognition on individual and organizational outcomes. We acknowledge that employee recognition can be a pro forma and bureaucratic exercise (Kelloway, in press) that may make little contribution to wellbeing. Therefore, we further hypothesize that the manner in which leaders give recognition matters and that transformational leaders will give employees recognition in a manner that increases the association between recognition and wellbeing. Taken together, these hypotheses suggest a moderated mediated relationship such that leadership predicts recognition which in turn predicts wellbeing and that leadership also moderates the effects of recognition on wellbeing.

We tested this model with data from 3132 employees from a large health care organization. Consistent with our hypotheses, leadership predicted recognition ( $b=.52$ ,  $p < .01$ ) and recognition predicted wellbeing ( $b = .12$ ,  $p < .01$ ). Moreover, leadership moderated the effect of recognition on wellbeing (Index of Moderation =  $.02$ ,  $p < .01$ ). As hypothesized, recognition was unrelated to wellbeing when transformational leadership was low ( $b= .02$ , ns) but was predictive of wellbeing when leadership was either moderate ( $b= .06$ ,  $p < .01$ ) or high ( $b = .10$ ,  $p < .10$ ).

These results illustrate one mechanism through which transformational leadership may affect wellbeing. Transformational leaders provide more recognition to individual employees. Moreover, recognition is more strongly related to wellbeing when leaders are seen as being transformational. Implications for further research and organizational practice are discussed.#

### **S67: The Signs of Struggle (SOS) Scale: The Development and Validation of a Workplace Tool for Leaders**

Jennifer K. Dimoff, E. Kevin Kelloway

*Saint Mary's University, Halifax, Canada*

Mental health problems are one of the most costly health and safety issues facing employers in North America. To combat these costs and improve employee mental health, many organizations have turned to external resources, such as Employee Assistance Programs (EAPs), and human resources solutions (e.g., health and wellness teams, psychological safety policies). Such resources are intended to help employees cope with myriad of challenges, such as family/marital problems, stress, substance abuse, and financial uncertainty. Yet, less than 4% of employees actually utilize EAP services each year. Thus, the key challenge for employers is getting employees to use resources when they need them. Managers may be able to play a substantial role in improving employee resource-use. Managers can build awareness of such programs and serve as the “first line of defence” in recognizing potential problems and/or warning signs of a struggling employee. To do so, managers need to have the appropriate tools to recognize the warning signs of a stressed or struggling employee. Thus, the purpose of this study was to develop another-rated scale that could be used by managers to help them identify when an employee is struggling and could benefit from resources and support.

The “Signs of Struggle” (SOS) scale consists almost entirely of behavioural items that describe signs of stress, burnout, anxiety, substance abuse, and depression in the workplace. Yet, the SOS is not diagnostic in nature and does not provide managers with insight into the specific issue with which an employee is struggling. Instead, the SOS is designed to help managers recognize that an employee is struggling. To develop the SOS scale, a two-part study was performed. In Part 1, a literature review (e.g., work impairment, strain, burnout, disability) and focus group (e.g., with SMEs in health and wellness personnel, disability counsellors, managers, HR personnel, physicians) were conducted to identify the behaviours of struggling employees. These behaviours were used to develop preliminary scale items. In Part 2, a convenience sample of 300 full-time employees (both managers and employees) was used to confirm the validity of the SOS. Participants were asked to think of someone at work that they know who had to go on disability leave or who left the organization due to a health or personal problem. With this prompt, participants were asked to rate the SOS items based on frequency (e.g., how often their colleague engaged in the behaviour; “1=Never”, “7=Every Day”) and timing (e.g., when did you first notice your colleague engage in the behaviour; “1=More than 6 Months Before”, 7=Less than 1 Week Before”). Items that received the highest ratings were retained in the final SOS scale.

Ultimately, the SOS is a content-validated scale that can be used by leaders to help recognize when employees may be struggling at work. If leaders are able to recognize these warning signs, they may be in a better position to provide support and direct employees towards resources that can help, such as EAP services or human resources.

### **S68: Developing Leadership through Strengths Use and Awareness: A Positive Psychology Perspective**

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Positive psychology is the scientific study of what enables individuals and communities to thrive. The strengths movement, which is at the core of positive psychology, entails that each person possess a series of particular strengths and that the identification, use and development of those strengths can foster positive outcomes such as well-being and performance. Research in occupational psychology has shown that leaders can effectively tap into these resources by using validated tools and methods. On an individual perspective, leaders can develop themselves by increasing the awareness of their own strengths and by learning to better apply them in their work. On a team perspective, leaders can propose development initiatives that aim to identify, share, use and expand their employees' strengths. Our results based on an intervention program conducted on a sample of 73 participants reveal that such initiatives can significantly increase workers' strengths knowledge, strengths use, well-being and work performance. These different approaches to leadership development will be presented and discussed.

### **S69: Transformational Leadership and Group Affective Tone: The Roles of Leaders' Psychological Well-Being and Group Potency**

Patrick Bruning<sup>2</sup>, Nick Turner<sup>1</sup>

<sup>1</sup>University of Calgary, Calgary, Alberta, Canada, <sup>2</sup>University of New Brunswick, Fredericton, New Brunswick, Canada

We investigated how transformational leadership behaviors, group potency, and leaders' psychological well-being can influence group affective tones, which in turn predict group members' perceptions of normative social information pertaining to job satisfaction, trust in the supervisor, and turnover intentions. To test the hypotheses, we used two waves of data collected six months apart from 143 individuals working in 30 work groups in a Canadian government organization. First, group potency moderated the relationship between group members' perceptions of their supervisors' transformational leadership behaviors and positive change in work groups' affective tone, such that transformational leadership had a significant positive relationship with changes in work groups' affective tones when groups felt less potent. Second, leaders' psychological well-being had a significant relationship with positive changes in work groups' affective tones over-and-above transformational leadership behaviors. Finally, positive changes in groups' affective tone had a relationship with members' perceptions of normative social information pertaining to higher job satisfaction, higher trust in the supervisor, and lower turnover intentions. We discuss the implications of the findings and possibilities for future research.

### **Symposium: Understanding Job Crafting - Part 1: Underlying Mechanisms, Boundary Conditions and Crossover Effects**

Chair: Ana Sanz-Vergel

University of East Anglia, Norwich, UK

Job crafting refers to the physical and cognitive changes individuals make in the task or relational boundaries of their work. Several studies have shown that job crafting is generally beneficial for employee well-being and performance. However, some findings suggest that different dimensions of job crafting have differential effects some of which are not beneficial for employees. These effects could be better understood if we analyse more in-depth the



underlying mechanisms explaining the link between job crafting and different outcomes, as well as the boundary conditions under which job crafting is particularly (un)favourable. Preliminary evidence also shows that job crafting has an impact outside the job domain (spillover) and that the effects of job crafting can be transmitted from one colleague to the other (crossover). However, this evidence is still scarce and more research on the spillover/crossover of job crafting is needed.

The present symposium addresses these research gaps by including five studies examining (1) mediators and boundary conditions in the link between job crafting and employee outcomes, and (2) spillover and crossover effects of job crafting. All the studies use a diary design to capture the fluctuations and short-term effects of this phenomenon. The first contribution by Hulshof and colleagues demonstrates that the effect of daily job crafting on work engagement is mediated by meaning in work. In the second contribution, Sanz-Vergel and colleagues show that there is a differential impact of the job crafting dimensions on daily recovery during non-work time and that job crafting also affects colleagues' recovery, particularly when there is high task interdependence. The third contribution by Demerouti and Peeters focuses on the daily crossover of a new dimension of job crafting (i.e., "functional reducing demands"), which takes place particularly in jobs low in resources. In the fourth contribution, Peeters and colleagues provide evidence for the crossover of "expansive" job crafting (i.e., increasing resources and challenges), particularly when employees do not perceive the supervisor as a transformational leader. Finally, Xanthopoulou and colleagues focus on the conditions under which daily job crafting is particularly relevant for employees who need to adapt to unfavourable organizational changes.

### **S70: How is Job Crafting Related to Service-Oriented Task Performance and Networking Behavior? The Role of Meaning in Work**

Inge Hulshof, Evangelia Demerouti, Pascale Le Blanc

*Technical University Eindhoven, Eindhoven, The Netherlands*

**Aims:** The aims of this study are twofold: first we aim to unravel the day-level mechanisms through which job crafting strategies might be related to service-oriented task performance (i.e. performance aimed at improving service to customers) and networking behavior (i.e. building a system of people in- and outside the organization to provide career-relevant information). Second, we aim to explore the mediating role of meaning in work on these relationships. We expect that on days when employees use more job crafting strategies (i.e. increasing challenging demands, increasing resources, and decreasing hindering demands), they will experience higher levels of work engagement. Being more engaged in turn will be related to more service-oriented task performance and higher levels of networking behavior. We further expect that the relationship between job crafting behavior and work engagement is mediated by meaning in work, since job crafting enables people to align their work with their preferences and needs, so they can to focus more on those aspects of the job that are important and significant (i.e. meaningful) to them.

**Method:** We conducted a daily diary study among employees of a Dutch unemployment agency (N = 156, days = 513). People filled in a diary for four consecutive working days. Results were analyzed using multilevel structural equation modelling in Mplus.

**Results:** Results were mostly in line with our expectations and showed that on days when employees used more job crafting strategies (seeking resources and increasing challenging demands), they experienced higher levels of work engagement. Enhanced levels of work engagement contributed to higher levels of service-oriented task performance and networking behavior during the day. We also found support for the mediating role of meaning in work on the relationship between job crafting and work engagement. Contrary to our expectations, the

reducing demands dimension of job crafting did not have a significant effect on work engagement. Meaning in work therefore did not mediate the relationship between reducing demands and work engagement. However, for all three job crafting strategies, both the direct and the indirect effects were significant.

Discussion: This study contributes to the existing literature in several ways. First, this is the first study that shows that the effect of job crafting (seeking resources and increasing challenging demands) on work engagement is mediated by meaning in work. This is important as it confirms the idea that job crafting represents attempts to find meaning in work, and by doing so, affects favorably positive work outcomes. Second, this study shows that networking behavior, which is increasingly important in our ever changing work environment, can be stimulated through job crafting. Third, this study shows that the use of daily job crafting enhances employees' service-oriented task performance and in this way the competitive advantage of organizations.

### **S71: When and How Job Crafting Increases Recovery: A Daily Study Among Colleagues**

Ana Sanz-Vergel<sup>1</sup>, Alfredo Rodríguez-Muñoz<sup>2</sup>, Mirko Antino<sup>2</sup>, Karina Nielsen<sup>1</sup>

<sup>1</sup>University of East Anglia, Norwich, UK, <sup>2</sup>Complutense University of Madrid, Madrid, Spain

Purpose: To date, different studies have shown that job crafting is beneficial for employees' well-being and performance. However, there is less empirical evidence of the impact of job crafting on colleagues, and a lack of evidence on how it affects employees' non-working life. Daily recovery after work depends to a great extent on the job demands experienced on a specific day as well as on the available job resources. In the present study we examine whether an increase of job resources and a decrease of job demands through job crafting help employees recover from work, and whether all job crafting dimensions lead to high recovery during leisure time. Moreover, we hypothesize that task interdependence will moderate the relationship between colleague's job crafting and employee's recovery.

Method: We used a diary design and collected data among 82 dyads of colleagues (N= 164 employees) over 5 consecutive working days (N= 820). We measured job crafting and task interdependence in the afternoon, and psychological detachment and relaxation in the evening. We used the Actor-Partner Interdependence Model to analyse our data.

Results: We found a differential impact of the job crafting dimensions on one's own recovery. For example, although most dimensions of job crafting are positive for recovery, decreasing social job demands and increasing challenging job demands hinder evening relaxation and detachment, respectively. Moreover, task interdependence moderates the relationship between colleague's job crafting and employee's recovery. Specifically, under conditions of high task interdependence, colleague's increasing challenging job demands is positively related to employee's detachment, whereas colleague's increasing quantitative job demands is negatively related to employee's detachment. Finally, colleague's decreasing social job demands has a positive impact on employee's relaxation when task interdependence is high.

Conclusions: Job crafting is not merely an individual phenomenon since it may affect others in positive or negative ways. Organisations should be aware that job crafting may emerge informally among colleagues and it may have an impact on employees' well-being. Initiatives such as collaborative job crafting would help employees make the most of crafting their jobs. Also, it has been demonstrated that not all job crafting dimensions are equal, so training programs on how to do job crafting and under which conditions it is not beneficial will help employees avoid some of the potential negative effects.



## **S72: Crossover of Reduction-Oriented Crafting Among Colleagues: A Diary Study on the Moderating Role of Working Conditions**

Evangelia Demerouti<sup>1</sup>, Maria Peeters<sup>2</sup>

<sup>1</sup>*Technical University Eindhoven, Eindhoven, The Netherlands*, <sup>2</sup>*Utrecht University, Utrecht, The Netherlands*

**Purpose:** The goal of this study was to zoom into the crossover of reduction-oriented job crafting of employees. We suggest that next to the dimension of reducing demands (i.e. making a job less strenuous), we introduce the functional reducing demands dimension which represents attempts of individuals to simplify the job and to make the work processes more efficient. We expected that the crossover of reduction-oriented crafting will particularly occur in jobs that are more demanding (high emotional demands and task interdependency) because imitating the behaviour of others saves them time and energy which they use to deal with job demands. Moreover, we expected that the crossover of reduction-oriented crafting will particularly occur in jobs that are low in resources (low autonomy) because in such contexts individuals lack the freedom to choose for other more expansive job crafting strategies. Finally, we expect that functional reducing demands will be positively related whereas reducing demands will be negatively related to work engagement.

**Methods:** These hypotheses were examined with a daily diary study among 65 dyads of co-workers working within the same unit (130 persons and 390 days). Participants filled in a general questionnaire and a daily diary for three consecutive working days that they both worked. Job demands and resources were measured on a general level whereas job crafting and work engagement on the daily level.

**Results:** Multilevel analyses confirmed the crossover of both job crafting dimensions. Moreover, we found that there is more crossover of day-level reducing demands among colleagues when emotional demands are high and more crossover of day-level functional reducing demands when task interdependency is high, compared to their counterparts low in emotional demands and task interdependency, respectively. Additionally, day-level functional reducing demands crossed over more in jobs low in autonomy compared to high autonomy. Lastly, on days that employees show more functional reducing demands they are also more engaged whereas reducing demands was unrelated to work engagement.

**Discussion:** These results imply that crossover of reduction-oriented job crafting among colleagues is helpful for jobs with unfavourable working conditions (high job demands and low job resources) and that working smarter make people more engaged in their job.

## **S73: Crossover of Expansive Job Crafting: About the Relationship with Performance and the Role of Leadership**

Maria Peeters<sup>1</sup>, Evangelia Demerouti<sup>2</sup>, Cilia van der Ven<sup>1,4</sup>

<sup>1</sup>*Utrecht University, Utrecht, The Netherlands*, <sup>2</sup>*Eindhoven University of Technology, Eindhoven, The Netherlands*, <sup>3</sup>*Utrecht University, Utrecht, The Netherlands*, <sup>4</sup>*Ikea Hengelo, Hengelo, The Netherlands*

**Objectives:** Despite the heightened interest in crossover of positive and negative psychological states between colleagues, only a few studies have examined the transmission of proactive work behaviours, such as job crafting, between employees. The present study proposes that crossover of expansive job crafting (i.e. seeking challenges and seeking resources) takes place on a day-to-day level between colleagues who work closely together. In addition, we assume that the crossover of job crafting is stronger under one specific condition: when employees (both actor and partner) perceive the supervisor as more transformational (by providing a safe

learning climate). Furthermore, we hypothesize that job crafting relates positively to employee's adaptive and contextual performance as reported both by the employee self and the colleague.

**Methods:** These hypotheses were examined with a daily diary study among 65 dyads of co-workers working within the same unit. Participants filled in a general questionnaire and a daily diary for three consecutive working days that they both worked. Job crafting was measured on the general level (control variable) and the daily level. Transformational leadership was only measured at the general level and performance was only measured at the daily level.

**Results:** Multilevel analyses confirm the crossover of seeking resources and partly confirm the crossover of seeking challenges. Transformational leadership acts as a moderator in this crossover process: however contrary to the predictions, there is more crossover of seeking challenges from actor to partner when the partner perceives the supervisor as low on transformational leadership. This effect was also found when actors perceive their supervisors as low transformational. Moreover, day-level seeking resources was positively related to self-rated and other-rated day-level adaptive performance and contextual performance. Day-level seeking challenges was not related to both types of other-rated or self-rated day-level performance.

**Discussion:** The study provides evidence for the crossover of seeking resources between colleagues and also demonstrates that seeking resources is related to better ratings on two aspect of daily performance, i.e. adaptive and contextual performance. Moreover, crossover of seeking challenges only takes place when employees perceive their supervisor as low transformational leaders. In this way, modeling positive behaviour from colleagues compensates for the absence of positive, transformational behaviour of leaders.

#### **S74: When Daily Crafting Matters More for Employee Functioning? The Moderating Role of Organizational Changes**

Despoina Xanthopoulou<sup>1</sup>, Paris Petrou<sup>2</sup>, Evangelia Demerouti<sup>3</sup>, Eleni-Lida Kalogeropoulou<sup>1</sup>, Sokratis Kostas<sup>1</sup>

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**Objectives:** In times of economic recession, unfavorable organizational changes (e.g., lay-offs, pay-cuts, or job intensification) are likely to be implemented within organizations. Employees' proactive behaviors are suggested to help them achieve a better person-job fit that facilitates their adaptation to threatening working conditions. Job crafting represents such proactive behaviors. Employees craft their jobs by actively trying to increase their job resources and to make their work more challenging, and by reducing their job demands. Recent studies that examined whether job crafting facilitates employee adaptation have been inconclusive as to which job crafting dimensions matter most in times of unfavorable changes. The purpose of this diary study was to investigate the perceived impact of organizational changes as a moderator in the relationship between daily job crafting and employee well-being (i.e., exhaustion and work engagement). We hypothesized that job crafting will be particularly beneficial for employees' functioning (i.e. exhaustion and work engagement), when the impact of organizational changes is high (vs. low). Furthermore, daily job crafting was expected to relate indirectly with need for recovery at the end of the workday via exhaustion and work engagement during work.

**Methods:** Participants were 70 employees that have been confronted with unfavorable organizational changes. Employees filled in a general questionnaire and a diary study for five consecutive workdays.

**Results:** Results of multilevel analyses generally supported the hypothesized, moderating effects for work engagement, but not for exhaustion. In line with expectations, daily resources seeking related positively with work engagement only when the impact of change was high (vs. low). This interaction effect had a negative indirect effect on need for recovery via work engagement. Daily reducing demands related positively to work engagement and indirectly to need for recovery via engagement. The impact of organizational changes moderated the relationship between demands reducing and exhaustion. However, the simple slopes test revealed that reducing demands related positively to exhaustion, when the impact of changes was high, while this relationship was negative, when the impact of change was low. This interaction related indirectly to need for recovery at the end of the workday via exhaustion, in a similar manner. Also, resources seeking related negatively to daily exhaustion and consequently, need for recovery at the end of the workday. Hypothesized effects were not supported for daily challenges seeking.

**Implications:** From a theoretical point of view, our results shed light to the conditions under which daily job crafting is particularly relevant for employees who need to adapt to unfavorable organizational changes. From a practical point of view, managers should motivate and empower employees to craft their job by seeking additional resources, when unfavorable changes are implemented.

**Conclusion:** Trying to reduce one's demands in highly uncertain situations can be extremely effortful and may increase strain and exhaustion. In contrast, seeking resources seems to be the most effective strategy for employees, who strive to adapt in changing environments.

### **Symposium: Future Policy Development on Psychosocial Risks and Mental Health at Work in the European Union**

Chair: Irene Houtman

*TNO, The Hague, The Netherlands*

This symposium focuses on policy development in relation to psychosocial risks and mental health in the European Union. The symposium will start with two presentations focusing on the 'context' in the EU. The first will consider the effect of public sector restructuring on mental health in the workplace in Greece; and the second will consider labour inspectorate practices in relation to psychosocial risks in the workplace in the EU. The symposium will then proceed with 3 presentations on findings from a policy-oriented EU-project on mental health at work which was carried out on behalf of DG Employment. The project had three objectives: (1) to provide the European Commission with information on the situation in the EU and EFTA countries of mental health in the workplace. This required an in depth analysis of the current EU bindings and non-binding policy framework on health and safety in the workplace; (2) to develop a range of scenarios, and identify the pros and cons of each with the ultimate objective of providing a sufficiently robust information base on which the Commission may rely in order to consider future policy options in this area; and (3) to develop guidance to help employers and workers alike fulfil their obligations, namely those provided by Framework Directive 89/391/EEC, with the overarching objective of making sure that mental health is considered an inescapable element of any occupational safety and health policies and practical measures. In this symposium the EU policy framework will be presented as well as national experiences and good practices on which policy scenarios were defined and a Delphi study was performed amongst EU stakeholders. In addition, an interpretative document of Framework Directive 89/391/EEC in relation to mental health in the workplace as well as a guidance document developed will be illustrated.

This results in the following set of presentations:

1. Restructuring seriously damages health and safety of workers: The case of the restructuring programme in local administration in Greece. Presenter: Theoni Koukoulaki
2. How does the Labour Inspectorate address psychosocial risks in European Countries? A qualitative case study approach. Presenter: Michael Ertel
3. A review of the European Union policy framework on psychosocial risks and mental health in the workplace. Presenter: Stavroula Leka
4. National experiences and good practices on psychosocial risks and mental health in the workplaces in the EU. Presenter: Richard Wynne
5. Priorities in EU policy scenarios –reflections on mental health. Presenter: Irene Houtman

### **S75: Restructuring Seriously Damages Health and Safety of Workers: The Case of the Restructuring Programme in Local Administration in Greece**

T. Koukoulaki<sup>1</sup>, D. Pinotsi<sup>1</sup>, E. Geogiadou<sup>1</sup>, A. Daikou<sup>1</sup>, C. Zorba<sup>1</sup>, A. Targoutzidis<sup>1</sup>, K. Poullos<sup>1</sup>, P. Panousi<sup>1</sup>, Y. Skoulatakis<sup>1</sup>, S. Drivas<sup>1</sup>, D. Kapsali<sup>1</sup>, K. Pakkin<sup>2</sup>

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Organisational restructuring has become a significant characteristic of the current working life, both for private and public organizations. Restructuring can be defined as an organisational change that is much more significant than commonplace changes (Kieselbach et al., 2009). Relocation, outsourcing, merger, internal restructuring and so on are all examples of restructuring (European Monitoring Centre on Change). There are studies which have found that downsizing leads to adverse health effects (Ferrie et al., 2008). Downsizing influences on work itself and employee well-being through several mechanisms. Downsizing may be followed by increased work load or work intensity, which combined with lack in autonomy or reduced job control, is a major source of stress, burnout and other threats to mental health (Kieselbach et al., 2009). Furthermore, work pressure (Smulders, 2003), but also fatigue and mental overload, have been found to be causes of occupational accidents. Downsizing also leads to increased job insecurity, which plays a significant role in the production of ill health (Kivimäki et al., 2000; Kivimäki et al., 2001a; Sverke et al., 2002; De Witte, 2005).

"Kallikratis" was a significant restructuring programme in local administration in Greece where 4.000 legal entities in local government were abolished, following a subsequent reduction of primary level local authorities from 1.034 to 325. The project "Hygeia in Kallikratis" was carried out by Hellenic Institute for Occupational Health and Safety (ELINYAE) in collaboration with FIOH and PREVENT. The project aimed at safeguarding health and safety during and after the transposition to the new system. The project involved a field study for investigating the effects on health and safety on employees in 13 municipalities. An adopted version of the "PSYRESJ" questionnaire on effects of restructuring was used. The sample was fairly good, 1.600 employees. The main problems identified were the "express" and "violent" implementation of restructuring in combination with lack or limited information and training. Moreover restructuring resulted in work intensification and increased reported stress. The most affected groups were the employees in urban planning services and the waste collection ones with increased work load and worsened working conditions.

A good practice guideline during restructuring was developed aiming at inherent prevention. A customised OSH management system was developed for local administration. A considerable number (280) of managers, employees and safety engineers received special training on the effects of restructuring and their prevention. The results of the project were presented in three conferences in Athens, Thessaloniki and Sparta, regions more affected by the restructuring.

Dissemination material (CD, leaflet, guideline, study) was delivered to municipalities in Greece, social partners, universities and other interest groups. Currently restructuring is expanding in private and public sector in Greece and further studies should be carried out to investigate their effects on health and safety of workers.

### **S76: How Does the Labour Inspectorate Address Psychosocial Risks in European Countries? A Qualitative Case Study Approach**

Michael Ertel, Hanna Janetzke

*Federal Institute for Occupational Safety and Health, Division 'Work and Health', Berlin, Germany*

**Introduction & Aim:** This presentation is part of a larger study which examines the way psychosocial risks are addressed by organizations in four European countries (Sweden, Denmark, UK and Spain). According to quantitative surveys (e.g. ESENER), many organisations perceive psychosocial risks as more challenging than other risks. In order to gain a deeper, contextual understanding of the interplay between drivers and barriers at organizational and national level including the involvement of key players in the management of psychosocial risks, we used a qualitative case study approach. As the labour inspectorate is a key OSH player, it is important to understand its strategy and activity profile in relation to psychosocial risks.

**Method & Approach:** We conducted semi-structured interviews with OSH stakeholders at national and company level that were complemented by the analysis of relevant documents at both levels. The interviews with OSH stakeholders from national level were recorded, transcribed and analysed using content analysis. The data were structured along three core categories: (1) Overall policy discourse in relation to psychosocial risks (2) Strategy and activity profile of the labour inspectorate in relation to psychosocial risks (3) Problems and outlook.

**Results:** Whereas there is a general consensus on the relevance to address these risks in Sweden and in Denmark, this is neither the case in the UK nor in Spain. In the UK, psychosocial risks are no longer regarded as a current priority and the discourse has changed in that the political climate focuses on individuals being responsible for their own health as opposed to their employers being responsible for the protection of their health. In Spain, the debate on OSH has diminished considerably as a result of the economic crisis over the last years. In terms of OSH strategy, Denmark plans to reduce the number of employees who are psychologically overloaded by 20% until 2020. In Sweden, new provisions on the psychosocial work environment were issued recently by the labour inspectorate; they shall support organisations in the management of these risks. In Spain, the EU-wide SLIC campaign in 2012 led to the elaboration of guidelines for labour inspectors on psychosocial risks. In the UK, the HSE, which had promoted the management standards for work-related stress from 2004 onwards, no longer actively engages with organisations in relation to work-related stress and psychosocial risks. There was a general agreement among national OSH experts in all countries that organisations should focus on the process in managing psychosocial risks than using a specific method.

**Discussion:** Strategy and activity profile of the labour inspectorate on psychosocial risks in Sweden, Denmark, UK and Spain differ according to longstanding national traditions and current policies on OSH. Only a proactive orientation of the labour inspectorate on psychosocial risks combined with the allocation of adequate resources will keep pace with emerging problems in today's work life.

## **S77: A review of the European Union policy framework on psychosocial risks and mental health in the workplace**

Stavroula Leka<sup>1</sup>, Aditya Jain<sup>1</sup>

<sup>1</sup>*University of Nottingham, Nottingham, UK, <sup>2</sup>Prevent, Leuven, Belgium*

Considering all we know about the impact of mental health on individuals, organisations and society, as well as the awareness of the positive impact of good mental health, a policy review was performed with a focus on both regulatory and voluntary policy instruments, detailing the 'history' of policy evolution in this area in the EU. This policy review was supplemented with a 'gap analysis'.

Employment, including OSH, policies as well as public health policies address the issue by placing emphasis on prevention through tackling risk factors and preventing discrimination. However some challenges have been identified. Although, for example, a common legal framework in the EU exists in relation to mental health in the workplace through the Framework Directive 89/391/EEC which covers all types of risk to workers' health, there still appears to be limited awareness of this provision both by employers and other key stakeholders.

From the review and gap analysis presented on regulatory and voluntary policy initiatives it can be observed that: a. there is lack of clarity and specificity on the terminology used; and b. although the different instruments/initiatives are based on related paradigms, very few of them provide specific guidance on managing risks in relation to mental health in the workplace to enable organisations (and especially small and medium-sized enterprises - SMEs) to implement a preventive framework of action. Several additional policy instruments of a non-binding nature have clarified the relevance and application of the Framework Directive in this area such as the framework agreement on work-related stress. In light of this, it would be advisable to revisit the content of the Framework Directive in relation to psychosocial risks and mental health in the workplace to provide further clarity and harmonise terminology across other key OSH legislation accordingly. This presentation will conclude by illustrating an interpretative document of Framework Directive 89/391/EEC in relation to mental health in the workplace developed as part of this project.

## **S78: National experiences and good practices on psychosocial risks and mental health in the workplaces in the EU**

Richard Wynne<sup>1</sup>, Veronique De Broeck<sup>2</sup>

<sup>1</sup>*WRC - Work Research Centre, Dublin, Ireland, <sup>2</sup>Prevent, Leuven, Belgium*

The review of policies at national level in the EU/EFTA countries highlighted that legislation in this area is more specific in several member states than the general EU legislation with many cases of updated legislation in recent years. Specific legislation refers directly to psychosocial risks, work-related stress, mental health in the workplace, harassment and bullying. It also makes clear reference to risk assessment for psychosocial risks as an employer responsibility.

Other initiatives such as strategies and campaigns as well as social partner agreements were also identified. In addition, we conducted a case study analysis, including interviews with key stakeholders, of different types of policy instruments and initiatives which showcased several examples of good practice that have been implemented in individual, or even across, member states. These have helped tremendously in clarifying the legal framework and employer and employee responsibilities. An example is the Management Standards for work-related stress in the UK that have been adapted in Ireland and Italy. Awareness raising of these initiatives and sharing of good practices across the EU has only recently started to materialise to some extent and there is far more scope in learning from these good practices and even exploring the feasibility of promoting a more unified approach at EU level.



A more co-ordinated action plan would be beneficial at EU level, clarifying requirements (both in employment and public health policies) and the case for mental health promotion in the workplace and drawing upon good practice efforts within specific countries. In addition, monitoring across the EU and between and within Member States should be further developed by refining existing systems. This presentation will also illustrate a guidance document on mental health in the workplace developed as part of this project.

### **S79: Priorities in EU policy scenarios - reflections on mental health**

Irene Houtman

*TNO, The Hague, The Netherlands*

The aim of this part of the project was to identify the best policy scenarios for mental health at the workplace. Scenarios were developed based on (national) examples of mental health policies and good practices. Next, priorities were identified by using the Delphi study design where scenarios were presented to EU stakeholders, who were asked to rank scenarios and to put forward arguments for their rankings.

The response was 53 stakeholders EU-wide, amongst whom were employer and employee representatives, policy makers, professionals and experts, and insurers. Non-binding initiatives on average ranked highest, whereas maintaining the status quo ranked lowest. 'Developing new EU-legislation' appeared to be most controversial: this scenario was most often ranked 'worst' as well as 'best'. The latter was the 'best choice' of employee representatives as well as labour inspection. Of the non-binding initiatives, raising awareness through campaigns was considered to be the most preferred initiative.

An additional aim was to conduct an economic analysis of the different options which indicated the availability of very little information on the costs of implementing different scenarios. Although qualitatively it appears that none would incur substantial development costs, some, e.g. a new directive, would take considerably longer to develop. The costs of implementation are likely to vary considerably; and would depend on uptake and also on the existing infrastructure and resources in member states.

### **Symposium: Interpersonal Mistreatment at Work: Measurement Issues**

Chair: Coralia Sulea<sup>1</sup>

Discussant: Dragos Iliescu<sup>2</sup>

<sup>1</sup>*West University of Timisoara, Romania,* <sup>2</sup>*University of Bucharest, Romania*

Interpersonal mistreatment at work is continually stimulating interest in researchers and practitioners due to its detrimental consequences for individual and organizations (e.g., low well-being, reduced performance). Importantly, the perspective of negative cycles where targets might become perpetrators draws attention on the seriousness of such phenomena and how it can become embedded in organizational features. Moreover, scholars in the field have emphasized how current constructs and related measures of interpersonal mistreatment seem problematic for advancing research due to differentiation issues between constructs and measures that fail at capturing distinctive features of mistreatment constructs (Tepper & Henle, 2011; Herschcovis, 2011).

In this symposium we set out to present a more refined perspective on interpersonal mistreatment classes and constructs with their associated measurement and an advanced methodological approach (e.g., longitudinal approach, latent class models) which brings forth antecedents of interpersonal mistreatment enactment and associate explanatory processes.

The first study focuses on both on civil and uncivil encounters at work as a group phenomenon that carries on over time, with emphasis on the leadership qualities and how targets might become perpetrators. The second study also has a longitudinal perspective, but on a stronger form on negative interpersonal acts, namely bullying, and emphasizes the explanatory role of psychological contract breach in the relationship between organizational change and bullying enactment at work. The next two papers focus on measurement issues regarding interpersonal mistreatment at work (e.g., incivility, ostracism, bullying): the third paper draws attention on the necessity of using more refined scales that reflect various types of mistreatment and therefore being closer to an organizational reality, whereas the fourth paper draws attention to the importance of categorizing latent variables using class modelling for a better identification of classes of mistreatment and also a better understanding of how targets might become perpetrators.

### **S80: Timisoara Interpersonal Mistreatment at Work Inventory (TIMWI): The Development and Validation of a New Instrument**

Coralia Sulea<sup>1,3</sup>, Gabriel Fischmann<sup>3,1</sup>, Dragos Iliescu<sup>2</sup>

<sup>1</sup>*Department of Psychology, West University of Timisoara, Timisoara, Romania,* <sup>2</sup>*Department of Psychology, University of Bucharest, Bucharest, Romania,* <sup>3</sup>*Research Group Work, Organisational and Personnel Psychology, KU Leuven, Leuven, Belgium*

**Purpose:** Acts of aggression and incivility at work are a constant concern for researchers and practitioners due to their detrimental effects on people and organizations. Despite this being a fairly well-studied topic, problematic issues regarding construct and measurement overlap still exist. Therefore, the current research addresses measurement issues in the field of interpersonal mistreatment at work (IMW) by proposing a multi-faceted conceptualization of this phenomenon and a new measurement scale. We assert that targets of IMW experience five types of negative acts, namely abusive behavior, ostracism, undermining, unwanted sexual attention, and incivility.

**Design/methodology/approach:** The scale was developed in several stages (construct/definition clarification, items generation, items refinement, scale validity) and tested on four samples of employees.

**Findings:** Results showed that a 15-item one-factor version of the scale with items reflecting all five types of mistreatment fitted the data best.

**Originality/value:** This research contributes to the interpersonal mistreatment at work literature by operationalizing a complex construct in one scale by taking into account its various components. This approach might offer a more accurate analysis of such experiences at work and their potential effects and antecedents.

**Limits:** Given the relevance of the topic and the potentially different ways of perceiving mistreatment, it would be recommended to test the scale on additional populations.

### **S81: Predictors of Received and Instigated Incivility: A Longitudinal Study**

Michael Leiter<sup>1</sup>, Arla Day<sup>2</sup>

<sup>1</sup>*Acadia University, Wolfville, Canada,* <sup>2</sup>*St Mary's University, Halifax, Canada*

Workplace civility and incivility have received increasing attention as indicators of the social climate of workplaces. Low intensity social encounters characterize the day-to-day social activity of workplaces in that they convey employees' acceptance or antipathy of one another.



The quality of civility or incivility in a social encounter serves as a meta-communication regarding the level of community and respect among colleagues or in supervisory relationships. A study of hospital employees examined the stability of civility or incivility over a one-year interval as well as the qualities that predicted the level of civility or incivility in the subsequent year.

Participants: 89 First line managers (FLMs) within health districts in eastern Canada completed surveys at a one-year interval regarding social interactions with others at work.

Measures: The following measures provided indicators of the impact of CREW on the social context of the units; Civility: The CREW Civility Scale (Osatuke et al., 2009); Incivility: Supervisor incivility, co-worker incivility, and instigated incivility were assessed with the Straightforward Incivility Scale (Leiter & Day, 2013); Career satisfaction was measured with a single item - 'my career is turning out as I hoped' - rated on a 1-5 agreement scale; The transformational leadership scale produced 2 scores: self-rating and director rating.

Results: Multiple regression analyses examined the predictors of instigated incivility, supervisor incivility, co-worker incivility, and civility by entering the Year 1 measure of each construct in Step 1 followed by other Year 1 predictors in Step 2. In addition to the autocorrelation ( $\square=.47$ ,  $t = 3.75$ ,  $p=.001$ ) Instigated incivility was predicted by supervisor incivility ( $\square=-.25$ ,  $t = -2.27$ ,  $p=.029$ ) and respondents' self-rating of transformational leadership behaviours ( $\square=.26$ ,  $t=2.15$ ,  $p=.037$ ), accounting for 52% of the variance in Year 2 instigated incivility ( $F = 14.70$ ,  $p<.001$ ). In addition to the autocorrelation ( $\square=.32$ ,  $t = 2.48$ ,  $p=.017$ ) supervisor incivility was predicted by respondents' Year 1 rating of their directors' transformational leadership behaviours ( $\square=.49$ ,  $t=3.79$ ,  $p<.001$ ), accounting for 49% of the variance in Year 2 supervisor incivility ( $F = 19.33$ ,  $p<.001$ ). In addition to the autocorrelation ( $\square=.43$ ,  $t = 3.75$ ,  $p=.001$ ) coworker incivility was predicted by Year 1 level of respondents' rating of their directors' transformational leadership behaviours ( $\square=.25$ ,  $t=2.32$ ,  $p=.026$ ) and their level of career satisfaction ( $\square=-.36$ ,  $t = -3.10$ ,  $p=.003$ ) accounting for 57% of the variance in Year 2 coworker incivility ( $F = 17.84$ ,  $p<.001$ ). In addition to the autocorrelation ( $\square=.41$ ,  $t = 3.00$ ,  $p=.005$ ) workgroup civility was predicted by Year 1 level of respondents' rating of their directors' transformational leadership behaviours ( $\square=.49$ ,  $t=3.40$ ,  $p=.002$ ) accounting for 34% of the variance in Year 2 civility ( $F = 11.31$ ,  $p<.001$ ).

Discussion: The analysis supports a model of workplace civility and incivility as a group phenomenon rather than an individual proclivity. Leadership plays a strong role both in terms of managers' self-perception of transformational leadership qualities as well as their experience of those qualities from their directors. Additionally, instigated incivility reciprocates to some extent received incivility. Finally, the high autocorrelations confirm that rates of incivility, received or expressed, perpetuates over time.

## **S82: The Relationship between Organizational Change and Being a Workplace Bully: A Three Wave Longitudinal Study**

Elfi Baillien<sup>1</sup>, Yannick Griep<sup>4</sup>, Tinne Vander Elst<sup>3,2</sup>, Hans De Witte<sup>2</sup>

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This study aims to address gaps in current research by investigating the relationship between organizational change and workplace bullying enactment. We expect that being exposed to organizational change will lead to enactment of workplace bullying at a later point in time. We moreover introduce general perceptions of psychological contract breach (PC breach) as an explanatory mechanism: there is an indirect relationship between exposure to organizational

change at T1 and workplace bullying enactment at T3 through PC breach at T2. Hypotheses were tested by means a between-subjects three-wave mediation model controlling for autoregressive effects (N= 1994; time lag of 6 months). The results revealed that exposure to organizational change at T1 related positively to PC breach at T2 (95% CIbc [.001; .166]). PC breach at T2 related negatively to bullying enactment at T3 (95% CIbc [.048; .086]). The bootstrap intervals showed an indirect relationship (95% CIbc [.001 ; .014]) between exposure to organizational change at T1 and workplace bullying enactment at T3 through PC breach at T2. In all, the results suggest that organizational change may contribute to workplace bullying enactment by fuelling perceptions of PC breach.

### **S83: Perpetrators and Targets Mistreatment. What's in the Name... A Matter of Content and Test Validity**

Guy Notelaers<sup>1</sup>, Elfi Baillien<sup>2</sup>

<sup>1</sup>University of Bergen, Hordaland, Norway, <sup>2</sup>Leuven University, Vlaams Brabant, Belgium

Recent empirical research yielded evidence that those who are exposed to workplace bullying are quite likely to bully others (Lee & Brotheridge, 2006; Hauge, Skogstad & Einarsen, 2009; Baillien, De Cuyper & De Witte, 2011). Indeed, the reported correlations approximates at times .50. Given that victims of workplace bullying are defined as employees that are in a powerless position (e.g., unable to defend themselves against negative social behaviours; see: Einarsen, Hoel, Zapf, & Cooper, 2011), these reported linkages are surprising.

Research findings are dependent upon the validity of constructs involved. In workplace mistreatment, measurement models of mistreatment show to be non-normal distributed to a level that exceeds the tolerance of traditional statistical – regression type approaches. Concrete: skewness and kurtosis exceed far above 1. This may seem only to be a statistical nuisance. However, the reported means and standard deviations of workplace conflict, aggression, bullying and counterproductive behaviours may indicate a weak content validity. The average response close to the first response category i.e. 'never' or 'complete disagree' and a small standard error may indicate that scholars are not measuring the presence of mistreatment but merely the absence of mistreatment. Consequently, testing hypothesis about the relationship between mistreatment and its possible antecedents or consequences may in endangered. Indeed, the  $cov(X,Y) = E[(X-E(X)) [Y-E(Y)]$  shows that the expected value is central to discern the meaning of the relationship. High skewness and kurtosis yield a small likelihood of an observation to be deviant from the expected value (that is close to 'never'). Hence, the hypothesis may be left untested when using linear regression models.

In this contribution we would to show that categorizing latent variables may solve the problem of content validity. By categorizing the latent variable, researcher may focus on the part of the distribution they are from a theoretical point of view interested in (e.g., targets, offenders, counterproductive, abusive). Different methods exist to categorize latent variable. An empirical driven method to categorize data is latent class modelling (Magidson & Vermunt, 2004). Applying latent class models to mistreatment allows researchers to identify in a non-arbitrary way classes of mistreatment (Notelaers, Vermunt, Einarsen & De Witte, 2006). Such (a) latent class(es) of mistreatment can subsequently be used is non linear regression type model to test hypothesis.

In this contribution, we will focus on this relationship between being mistreated and mistreating others. Using Belgian data on being exposed to workplace bullying behaviors from both a receiver and sender perspective, we will use a 2 factor latent class model to discern this relationship. The results showed that the association between both factors is strong. Yet, the latent profile yielded that victims of bullying had not the highest likelihood to bully. Those who

were most likely bullies were and were unlikely to be severe targets. However, those who reported some exposure also exposed others to negative social behaviours. The strong association is mostly due to the overlap of observations between the 'no' and 'now and then' response categories for some items of both measures.

## **Symposium: Risks and Resources Associated with Burnout across Occupations and Countries**

Chair: Gabriele Freude<sup>1</sup>

Discussant: Guy Potter<sup>2</sup>

<sup>1</sup>*Federal Institute for Occupational Safety and Health, Berlin, Germany,* <sup>2</sup>*Duke University School of Medicine, Durham, NC, USA,*

Burnout, as characterized by emotional exhaustion, is a result of persistent work-related stress and constitutes an important health risk. Research on the relationship between psychosocial job characteristics and burnout suggests that job characteristics serve as risk factors for burnout in some contexts, or as resources protecting against burnout in other contexts, fitting within the framework of the Job Demands-Resources Model (JD-R). The symposium presents four papers, with samples from three countries, taking approaches that address limitations in current research on burnout. Studies use the Copenhagen Psychosocial Questionnaire (COPSOQ) to account for the diversity of job characteristics that may perpetuate and/or protect against burnout.

Paper 1 will focus on work-related predictors of burnout including a wide range of COPSOQ subscales in the "Study on Mental Health at Work (German acronym: SMGA)", based on a representative sample of German workers. The study uses factor analysis to identify underlying constructs that predict burnout, as well as to identify factors with the strongest association to burnout. The results indicate that high workload demands predict burnout across a broad range of occupations.

Paper 2 complements Paper 1 by examining how workload demands are moderated by other job characteristics in the nursing profession within a JD-R framework. The sample is from the Nursing Stress Outcomes Study a sample on actively working nurses from a large private hospital in the United States. We examine whether the association between workload demands (COPSOQ Quantitative Demands) and burnout is moderated by other job resources, as assessed by the COPSOQ.

Paper 3 continues the focus on the JD-R model by examining if specific demands and resources are differentially important for burnout depending on occupational sectors. The prospective Danish Work Environment Cohort Study provides the sample for this analysis. Findings will be presented that consider the interaction between these job-specific demands and resources in three occupational groups: manual workers, office workers and workers dealing with other people (e.g., customers, patients, etc.).

Paper 4 focuses on the underreported workplace behavior of bullying which constitutes an important source of social stress at work and a potential risk factor of burnout. We present estimates for the association with burnout – differentiating between bullying by colleagues and supervisors. As in Paper 1, data is taken from the SMGA and job characteristics are assessed with the COPSOQ.

Common findings across papers highlight the utility of the COPSOQ, and support a JD-R framework for understanding burnout that is robust across countries and occupations.

## **S84: Mobbing and Burnout in a Representative Sample of the German Working Population**

Grit Müller<sup>1</sup>, Uwe Rose<sup>1</sup>, Guy Potter<sup>2</sup>, Peter Martus<sup>3</sup>, Gabriele Freude<sup>1</sup>

<sup>1</sup>*Federal Institute for Occupational Safety and Health, Berlin, Germany*, <sup>2</sup>*Duke University School of Medicine, Durham, NC, USA*, <sup>3</sup>*University of Tuebingen, Tuebingen, Germany*

**Background:** Mobbing is an important social stressor at work which might affect health negatively. Social isolation or threatening comments are examples for mobbing which can be initiated by colleagues, supervisors or managers. Mobbing may be a source of chronic stress that has been found to be a risk factor for the development of cardiovascular diseases and psychiatric disorders. The aim of this present study is to investigate the relationship between mobbing and burnout in a representative study of the German working population.

**Methods:** We apply data from a cross-sectional representative study from Germany - the Study on Mental Health at Work. The sample includes 4,511 individuals between 31 to 60 years of age from the German working population. Computer-assisted personal interviews were conducted by trained interviewers in 2011 and 2012. The Oldenburg Burnout Inventory (OLBI) is applied to measure emotional exhaustion, the core component of burnout. Mobbing is present if victimization persists for at least 6 months and happens at least once a week. When assessing mobbing, we differentiated between mobbing initiated by colleagues or supervisors. The sample is limited to persons in full or part time employment at the time of the interview and with complete information on mobbing and burnout (n=3,352). Logistic regression models are estimated to assess the association between mobbing by colleagues or supervisors and burnout. The analyses are stratified by gender and adjusted by age.

**Results:** The prevalence of emotional exhaustion (OLBI-Score  $\geq 3$ ) is 10.2% in men and 12.0% in women. Nearly 7% of the working population report to experience mobbing by either colleagues or supervisors or both. No gender or age differences are detected among burnout and mobbing. Preliminary findings show that mobbing is associated with an increase in the prevalence of burnout. Men and women who are mobbed by their colleagues have a 2.6 (95% confidence intervals (CI): 1.3-5.1), respectively, a 5.9 (95% CI: 3.3-10.7) times higher chance to be affected by emotional exhaustion. Mobbing by supervisors results in an OR for burnout of 5.3 (95% CI: 3.3-8.5) in men and 5.2 (95% CI: 3.3-8.4) in women.

**Conclusions:** We find a strong association between mobbing and the prevalence of burnout providing support for the role of mobbing as an important social stressor at work and a potential health risk. Being mobbed by one's supervisor appears to have a stronger impact on burnout than being mobbed by colleagues in men.

## **S85: Burnout, Psychosocial Resources, and Workload Demands in the Nursing Profession**

Guy Potter<sup>1</sup>, Daniel Hatch<sup>1</sup>, Grit Mueller<sup>2</sup>, Peter Martus<sup>3</sup>, Gabriele Freude<sup>2</sup>

<sup>1</sup>*Duke University, Durham, North Carolina, USA*, <sup>2</sup>*Federal Institute for Occupational Safety and Health, Berlin, Germany*, <sup>3</sup>*University of Tübingen, Tübingen, Germany*

**Background:** Burnout, particularly the dimension reflecting emotional exhaustion, is a potent predictor of adverse outcomes related to health and work performance. While many job characteristics can contribute to burnout, some characteristics may also reflect resources that moderate burnout in certain contexts. These resources may be particularly important when a specific job demand associated with burnout is not easily modified. For instance, in the nursing occupation of the United States, shortage of nurses, an aging population needing care, and rising healthcare costs all operate against decreasing the high levels of workload reported by nurses as contributing to burnout. In this context, other aspects of the psychosocial work environment may be leveraged as resources to attenuate the effect of high workload demands on emotional exhaustion among nurses.

**Methods:** The current paper undertook to examine this issue in the Nursing Stress Outcomes Study (N = 402), a longitudinal study of job stress, mental health, and work ability in a sample of actively working nurses in a private hospital system in the United States. The current paper is based on cross-sectional data from the study. Burnout was operationalized with Oldenburg Burnout Inventory (OLBI), and psychosocial job characteristics were assessed with several scales from the Copenhagen Psychosocial Inventory (COPSOQ): 1) Quantitative Demands, 2) Degree of Freedom, 3) Influence, 4) Possibilities for Development, 5) Role Clarity, 6) Leadership Quality, and 7) Social Support. Zero-order correlations indicated that all of the individual job characteristics were significantly associated with burnout. Based on our hypothesis, we regressed the Emotional Exhaustion scale of the OLBI on COPSOQ Quantitative Demands, and tested for an interaction of Quantitative Demands with each of the other COPSOQ scales, in separate models.

**Results:** We found that three scales moderated the relationship between higher Quantitative Demands and greater Emotional Exhaustion: 1) Role Clarity, 2) Leadership Quality, and 3) Social Support. In particular, higher Role Clarity was associated with lower levels of burnout at low-to-moderate levels of Quantitative Demands; however, the moderating effects of all three scales were substantially diminished at high levels of Quantitative Demands.

**Discussion:** While better communication of roles and responsibilities may be an important resource for coping with workload demands among nurses, it may be insufficient to mitigate emotional exhaustion when workload demands are at a high level. Because high workload demands are a potent predictor of emotional exhaustion, the perceived costs and challenges of reducing individual nursing workload warrant attention from organizations and researchers.

### **S86: Interaction Effects of Psychosocial Occupational Factors on Burnout: 5 Year Follow-up Analyses of 5,924 Danish Employees**

Hermann Burr<sup>1</sup>, Thomas Clausen<sup>2</sup>

<sup>1</sup>*Federal Institute of Occupational Safety and Health (BAuA), Berlin, Germany,* <sup>2</sup>*National Research Centre for the Working Environment (NRCWE), Copenhagen, Denmark*

**Background:** Based on the Job Demands-Resources (JD-R) model, we in this study investigated if certain occupation-specific interactions of demands and job resources take place when predicting burnout. As risk factors for the development of burnout over five years, we ask 1) regarding manual workers, if the demand work pace is moderated by the resource influence at work; 2) regarding office workers, if the demand amount of work is moderated by the resource leadership quality; and 3) regarding workers dealing with other people, if demand emotional demands is moderated by the resource leadership quality.

**Method:** In the Danish Work Environment Cohort Study, 5,924 employees took part in the 2000-05 or the 2005-10 cohorts, or both (n = 1,764); yielding 7,688 five-year observations (1,604 observations from manual workers, 2,043 from information workers; 2,785 workers from workers dealing with other people; 1,252 observations could not be classified). Data on gender and age were from register data, data on burnout (vitality reversed from SF-36), occupational sector (regrouping of ISCO 1988), and psychosocial factors (COPSOQ measures) were from questionnaire. Linear regressions with burnout at follow-up as dependent variable were performed in occupational sectors controlling for gender, age, cohort and burnout level at baseline.

**Results:** Among manual workers, the demand work pace and the resource influence at work interacted (the risk for burnout with high demands were lowered by high influence;  $p=.018$ ); the main effect of work pace persisted as significant risk factor for burnout ( $p=0.000$ ). Among office

workers, the demand amount of work and the resource leadership quality did not interact ( $p=0.276$ ); also, none of these factors predicted burnout alone. Among workers dealing with other people, emotional demands and the resource leadership quality did not interact ( $p=0.552$ ); however, emotional demands alone predicted burnout ( $p=0.000$ ), while leadership quality did not. Sensitivity analyses showed none of the interactions investigated above took place in any other occupational sector.

Discussion: In a population of Danish employees, only one of three hypotheses inspired by the JD-R model was confirmed, namely that work pace and influence at work interacted as risk factors for burnout among manual workers; high influence at work lowered the risk for burnout with high demands. Among office workers, the resource management quality did not lower the possible risk of quantitative demands; among workers working with other people, the resource management quality did not lower the possible risk of emotional demands.

### **S87: Work- and Individual-related Determinants of Vulnerability to Burnout, Depression and Work Ability**

Peter Martus<sup>1</sup>, Uwe Rose<sup>2</sup>, Bettina Brendel<sup>1</sup>, Grit Mueller<sup>2</sup>, Guy Potter<sup>3</sup>, Gabriele Freude<sup>2</sup>

<sup>1</sup>*Institute for Clinical Epidemiology and Applied Biometry, University Tuebingen, Tuebingen, Germany,* <sup>2</sup>*Federal Institute for Occupational Safety and Health, Berlin, Germany,* <sup>3</sup>*Department of Psychiatry and Behavioral Sciences Duke University Medical Center, North Carolina, USA*

The focus of the present paper is on the contribution of job related factors to burnout, depressive symptoms and work ability. To this end the data of a large representative cohort ( $N = 4058$ ) of male ( $N = 2045$ ) and female ( $N = 2013$ ) employees between the age of 31 to 60 years was analysed. The psychosocial job characteristics were assessed by several scales of the Copenhagen Psychosocial Inventory (COPSOQ): 1) Quantitative Demands, 2) Cognitive Demands, 3) Job Insecurity, 4) Degree of Freedom, 5) Influence, 6) Possibilities for Development, 7) Role Clarity, 8) Leadership Quality, and 9) Social Support. Level of emotional exhaustion (burnout) was determined by the Oldenburg Burnout Inventory (OLBI), the severity of depressive symptoms was assessed by the Patient Health Questionnaire-9 (PHQ-9), and the Work Ability Index (WAI) was used to measure the work ability. In addition, self-efficacy (General Self Efficacy Scale, GSE) as well as frequency and type of critical life events (e.g. change of work, change of home, divorce, severe disease partner /relative, death of partner / relative) were evaluated.

Multiple linear regression analyses (stratified for gender) identified five COPSOQ-scales as relevant predictors for the three outcome variables. Irrespective of gender, higher quantitative demands and higher job insecurity were associated with higher levels of emotional exhaustion and depressive symptoms but lower work ability. Notably, the standardized regression coefficient was particularly high for quantitative demands with respect to burnout meaning that a (perceived) high workload is an important risk factor in the context of emotional exhaustion. In contrast, higher levels of degree of freedom, leadership quality and possibilities for development predict lower level of exhaustion, less severe depressive symptoms and higher work ability. A high level of self-efficacy was a rather strong protective factor in the sense that it can prevent the development of burnout and depressive symptoms, and it can influence positively work ability.

Further, burnout symptoms and work ability were less vulnerable to critical life events compared to the development of depressive symptoms. Path models revealed that the predictive value of working conditions (i.e., quantitative demands or job insecurity) for work ability and depression was mediated by burnout symptoms.



Age was virtually not associated with the development of burnout after adjustment for quantitative demands or depressive symptoms. However, it could be identified as an independent predictor for work ability, meaning that employees with increasing age show declined work ability compared to younger people.

### **Symposium: Understanding job Crafting - Part 2: Underlying Mechanisms, Boundary Conditions and Crossover Effects**

Chair: Ana Sanz-Vergel

Discussant: Karina Nielsen

*University of East Anglia, Norwich, UK*

Job crafting refers to the physical and cognitive changes individuals make in the task or relational boundaries of their work. Within the theoretical framework of the Job Demand-Resources (JD-R) Model, job crafting has been conceived as proactive behaviour initiated when there is a misfit between the person and the job. Job crafting has been mainly examined in relation to work engagement, job satisfaction and performance. Alternative relationships between job crafting and these (and other) outcomes have not been explored yet, which makes it difficult to achieve a complete understanding of this phenomenon.

The second part of this symposium addresses this gap by including five studies that examine relationships between job crafting, job demands and resources, and some outcomes that have not received much attention thus far. These contributions are based on a variety of samples and research methodologies, such as longitudinal studies, and what it has been recently called a "shortitudinal" study.

The first contribution by Bakker demonstrates that job crafting in the form of increasing job resources is positively related to opportunities for development, performance feedback and P-O fit, and negatively to hindrance job demands, particularly when work engagement is high. In the second study, Zeijen and colleagues use two samples and two different measurement moments to analyze four different self-management strategies as mediators between work engagement/workaholism and "expansive" job crafting. In the third contribution, Hakanen and Peeters present evidence that different states of affective well-being at work lead to different job crafting behaviours over time.

Finally, Petrou and Bakker show that work engagement is negatively related to decreasing hindering demands and positively related to challenging demands particularly when organizational transparency is high. Also, increasing structural resources predicts self-rated adaptation one month later. In order to create a global picture of all the studies that have been presented and to address future pathways for job crafting research, Professor Karina Nielsen will serve as a discussant.

### **S90: The Role of Job crafting in JD-R Theory: A Study among Nurses**

Arnold Bakker

*Erasmus University Rotterdam, Center of Excellence for Positive Organizational Psychology, Rotterdam, The Netherlands*

Purpose: This study examines the link between job crafting and job characteristics as a function of employee work engagement. On the basis of job demands-resources theory, we predicted that job crafting would be positively related to job resources and person-organization fit, and negatively related to hindrance job demands. Using conservation of resources theory, we hypothesized that these relationships would be qualified by employee work engagement.

Sample: A total of 5272 health care professionals from one of 35 different organizations filled out an electronic questionnaire (response is 55%).

Results: The results of a series of hierarchical regression analyses offer support for our hypotheses. Job crafting in the form of increasing job resources was positively related to opportunities for development, performance feedback, and P-O fit; and negatively related to hindrance job demands – particularly when work engagement was high (vs. low).

Conclusion: These findings suggest that work engagement is an important boundary factor for job crafting attempts.

### **S91: Towards Unraveling the Underlying Mechanisms of Job Crafting: How Workaholic versus Work Engaged Employees Craft Their Jobs**

Marijntje Zeijen<sup>1</sup>, Maria Peeters<sup>2</sup>, Jari Hakanen<sup>3,4</sup>

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Purpose: As work becomes more dynamic and decentralized, the need for employees to be proactive rapidly increases. Among the considerable amount of studies investigating proactivity, many do so by means of job crafting. Job crafting refers to all proactive actions employees take to redesign their jobs in order to create a better fit with their job. Although job crafting reveals to be a promising concept, little is known about its working mechanisms. In the present study, we aim at contributing to this issue by examining job crafting of two different types of heavy work investors, namely highly work engaged versus highly workaholic employees. By focusing on these types of heavy work investors, we expect to shed light on the working mechanisms of job crafting as both types invest a great amount of energy into their jobs based on different motivations and with very opposite outcomes. In addition, we scrutinize on how employees' steer their behavior towards different job crafting behaviors by considering their self-management strategies.

Method: The hypotheses were tested using two samples (N = 181, N = 106), and two different measurements moments. The predictors: work engagement and workaholism, and four different self-management strategies (self-goal setting, self-observation, self-reward and self-punishment), as mediators, were measured at T1. The dependent variables: challenge seeking and resource seeking (i.e. two forms of expansive job crafting) were measured three months later (T2). We employed Structural Equation Modeling and compared the structural models between both samples using multiple group comparison.

Results: Results were largely replicated in both samples indicating the robustness of our findings. We found strong relationships between work engagement and both challenge seeking and resource seeking, which were partially mediated through the management strategies self-goal setting and self-observation. Workaholism on the other hand was only strongly associated with challenge seeking, and this relationship was solely mediated through self goal setting. Moreover, we found a strong relationship between workaholism and self-punishment strategy. The self-punishment strategy however did not relate to any type of job crafting.

Conclusions: Findings reveal that work engaged employees manage their work situation and emotions in a more proper way than workaholics, which triggers them to craft their job in a balanced way (i.e. seeking for both challenges and resources). In addition, workaholics mostly tend to craft their jobs in an unbalanced way (i.e. solely seeking for challenges), thereby increasing the risk of exhaustion. Theoretically the results imply that self management



strategies are an underlying mechanism of job crafting. In practical terms, results suggest that interventions aimed at increasing self-observation strategy may stimulate workaholics to craft in a more balanced way, thereby attending to additional resources, when the (work) situation requires it.

## **S92: Who are Job Crafters? A Longitudinal Study on How Different Work-Related States Predict Job Crafting and Each Other**

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**Aim:** Research on job crafting, i.e., what employees themselves can do to improve their well-being, has mainly focused on its consequences. In this two-sample longitudinal study, our first aim was to investigate whether engaged, satisfied, burned out, bored out, and workaholic employees craft different aspects of their jobs. Our second aim was to study how different work-related well-being constructs (e.g. work engagement, job satisfaction, burnout, workaholism, and job boredom) may affect each other over time.

**Method:** We used two longitudinal datasets: Sample 1 comprised a four-year follow-up data on 1877 Finnish dentists and Sample 2 a three-year follow-up data on 2334 Finnish employees representing heterogeneous set of professions. In sample 1, well-being constructs (work engagement, job satisfaction, burnout, and workaholism) were measured in both 2010 and 2014, and the four dimensions (increasing structural and social resources, and increasing challenges and decreasing demands) of job crafting were measured only in 2014. In sample 2, both job crafting (three dimensions excluding decreasing demands) and slightly different combination of well-being constructs (work engagement, stress, and job boredom) were measured both in 2011 and 2014. Structural equation modeling was employed.

**Results:** In Sample 1, work engagement and workaholism at T1 positively predicted increasing structural resources and increasing challenges at T2. Engagement at T1 also predicted increasing social resources at T2, whereas workaholism at T1 negatively predicted decreasing hindrance demands at T2. Job satisfaction was unrelated to job crafting and burnout only predicted decreasing hindrance demands at T2. In Sample 2, the model in which well-being constructs predicted job crafting fitted best to the data. Similarly to Sample 1, in Sample 2 work engagement at T1 predicted all job crafting dimensions at T2, but stress and job boredom at T1 did not influence job crafting three years later. As regards to our second aim, in Sample 1, work engagement at T1 negatively predicted burnout and positively influenced job satisfaction at T2. Workaholism at T1, in turn, predicted job burnout in the future. In Sample 2, work engagement at T1 had a negative reciprocal relationship with stress symptoms and in addition negatively influenced job boredom at T2.

**Conclusion:** Different states of affective well-being at work may lead to different job crafting behaviors and these are worth considering in organizations when encouraging proactive behaviors. It may be that in the long term it is work engagement that predicts job crafting, whereas in the shorter term it could be the other way round. This study lends further support for work engagement as an optimal state at work, as it positively influences both future job crafting and other states of well-being at work.

### **S93: The Role of Organizational Transparency and Frequency of Organizational Change in Job Crafting**

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**Objectives:** Existing literature suggests that engaged employees craft their jobs (i.e., via increasing their social and structural resources, increasing their challenging demands or decreasing their hindering demands) in order to facilitate their adaptation to new tasks. The present study proposes that the link between work engagement and job crafting is stronger under two specific conditions: (i) when there are frequent organizational changes (i.e., adaptation is necessary); and (ii) when the organization is transparent (i.e., the organization avoids secrecy and communicates in a timely, accurate, balanced and unequivocal way). Furthermore, we hypothesized that job crafting relates positively to employee adaptation to new tasks, reported both by employees and by important others at the workplace.

**Methods:** The participants of the study were 324 employees working in 16 different organizations that were clients of a consultancy bureau. They completed an online survey (T1) as well as a follow-up measure one month later (T2). Furthermore, 324 important others at work (co-workers, managers or subordinates) were selected and asked to rate one time the adaptation of the participant to new tasks.

**Results:** Analyses revealed that T1 work engagement positively related to T1 increasing structural resources, increasing social resources and increasing challenging demands and negatively related to T1 decreasing hindering demands. Furthermore, T1 work engagement was more strongly positively related to increasing challenging demands when organizational transparency was high. The rest of the analyses largely failed to detect interaction effects and rather suggested that the moderators were directly related to job crafting. Specifically, T1 frequency of organizational changes positively related to T1 increasing social resources and increasing challenging demands. T1 organizational transparency positively related to T1 increasing structural and social resources. Finally, T1 increasing structural resources positively predicted T2 self-rated employee adaptation, T1 increasing challenges positively predicted other-rated adaptation and T1 decreasing hindering demands negatively predicted other-rated adaptation.

**Implications:** Our findings have implications for management and practice and suggest that open, honest and non-secretive communication is the way to motivate employees to display a proactive approach towards organizational changes.

**Conclusion:** The study suggests that job crafting is a meaningful strategy in the context of organizational change, especially when that context treats employees in a respectful way. Job crafting strategies help employees adapt to their new tasks and also to display adaptive behavior that is perceived by important others at work.

### **Symposium: Mining Mental Health in Canada**

Chair: Michel Larivière

Discussant: Céline Larivière

*Laurentian University, Sudbury, Ontario, Canada*

A key outcome of research in occupational health psychology is increasing worker mental health and wellbeing. A necessary first step in such efforts is a current and accurate measurement of these two outcome variables. We have observed a significant increase in epidemiological-type research targeting the mental health and wellbeing of various types of

workers in various types of industries. Remarkably absent from this growing body of scientific enquiry is research that specifically targets those employed in the mining industry. Their absence in the literature is surprising given their frequent exposure to several physical and psychosocial hazards.

With this in mind, this symposium will present the efforts of one large mining company to better understand their workforce's mental health and well-being. The company in question was motivated for this research by a number of interrelated factors: 1) a cultural shift toward increased sensitivity to mental health issues in the Canadian population, 2) trends in the types of workplace injuries experienced by mining workers and 3) the estimated prevalence of mental health issues as a causal agent in workplace absenteeism/presenteeism. The symposium will present the trajectory of a large-scale epidemiological survey in a Canadian mining workforce. In doing so, it will highlight the collaborative nature of the research, which involved several stakeholders: workers, researchers at the Center for Research in Occupational Safety and Health (CROSH) at Laurentian University, as well as union and corporate leaders.

The first paper will provide a brief history of mining in Canada, the overall health of those who work in this industry, as well as the growing interest in their mental health. The paper will describe the genesis for the project, its structure and its management by several key stakeholders. The second paper offers a broad description of mining worker health from a physical and physiological perspective including issues rarely discussed in the literature such as reproductive health. The third paper offers a critical review of the literature as it relates to the psychosocial hazards of mining work such as shiftwork, work-family balance, perceived support, work pace, and exposure to traumatic stimuli. Next, we describe the actual methodologies used in this study, expanding on both the quantitative and qualitative techniques used. We intend to offer the statistical tests that are most likely to answer our four fundamental research questions in this project. Finally, we present preliminary data from the study that was extracted from a comprehensive pilot study effectuated several weeks prior to the full study.

#### **S94: Mining Mental Health in Canada**

Michel Larivière<sup>1,2</sup>, Céline Larivière<sup>1,2</sup>, Zsuzsanna Kerekes<sup>1,2</sup>, Behdin Nowrouzi<sup>1,2</sup>, Caroline Dignard<sup>1,2</sup>, Alain Boulay<sup>1,2</sup>

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Despite its inherent dangers, mining continues to be an important economic engine in Canadian. In Ontario alone, more than 16,000 people are directly employed by this sector. There are approximately another 8,000 Ontarians who work in support services to mining and the total employed in this industry continues to grow. There have been considerable strides made over the last several years to ensure the physical safety of mining workers. For instance, lost time injury rates have been 0.4 per 200,000 hours for the first nine months of 2012. This compares with lost time injury rates of 6 per 200,000 hours in 1981. Still, mining workers continue to be vulnerable to several physical and environmental hazards that have been linked to hearing loss, respiratory illnesses, neoplasms, and musculoskeletal impairments. These conditions are typically documented and monitored closely by industry and governmental agencies. Remarkably absent from most of the mining health and safety literature is mental health and wellbeing. With progressively less stigmatisation attached to mental illness, the mining industry has shown a growing interest in this issue with some companies demonstrating considerable leadership in better understanding the wellbeing of their workers. Moreover, the industry is increasingly sensitive to the costs of poor worker mental health given its relationship to injury, illness, absenteeism and presenteeism. This presentation will serve as an introduction to the symposium and highlight one company's interest in worker wellbeing and its leadership

within a multi-stakeholder, collaborative research project. The genesis for this research, its structure, and wide support from academe, industry, and government will be described. As well, the presentation will explore some of the methodological and ethical challenges of applied psychological research in the unfamiliar setting of mining.

### **S95: The Psychosocial Hazards of Mining**

Zsuzsanna Kerekes<sup>1,2</sup>, Michel Larivière<sup>1,2</sup>, Behdin Nowrouzi<sup>1,2</sup>, Céline Larivière<sup>1,2</sup>, Caroline Dignard<sup>1,2</sup>, AJ Boulay<sup>1,2</sup>

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Previous literature has demonstrated that mining and mining related work present significant hazards to workers (ILO, 2010, Gyekye, 2003, Amponsah-Tawiah et al, 2013). They are exposed to a number of potentially dangerous conditions and therefore are at increased risk of physical and mental harm. This presentation will consider some of the more controllable psychosocial hazards in a population of mining workers with the additional objectives of 1) exploring strategies to mitigate their effects, and 2) suggesting what could be targeted to improve workers' mental health and safety from a mental health promotion point of view. Guided by a framework offered by Leka and Cox (2010) we will offer a discussion on mining workers' mental health, safety experience, injury rates, the length of their disability leave(s), recovery processes and also the return to work processes. The foundation of the presentation is a large scale mental health and wellbeing survey conducted in Ontario, Canada.

Among other goals, the survey intended to better understand the relationships between various hazardous factors (chemical, physical, mechanical, biological and psychosocial) in the mining workforce. Moreover, our research team measured job content (e.g., high uncertainty and unpredictability of environmental hazards), work load and pace (e.g., work overload, time pressure), work schedule (e.g., shift-work), control (e.g., participation in decision making), environment and equipment (e.g., noise, dust, vibration, etc.), organizational culture and function (e.g., communication, support), interpersonal relationship at work (e.g., social isolation, feedback), role in organization (e.g., role conflict, responsibility), career development (e.g., social value to work) and home-work influence (e.g., support at home, conflicting demands), as well as the prevalence rates of symptoms related to anxiety, depression, sleep disturbance, fatigue, substance use, burnout and PTSD. To this end, we made use of the Mental Health Inventory, PCL-5, BDI, BAI, Pittsburgh Sleep Quality Index, Fatigue Severity Scale, AUDIT, Copenhagen Burnout Inventory, Brief COPE, Perceived Stress Scale, the Guarding Minds at Work questionnaire and some subscales of the NIOSH Generic Job Stress Questionnaire. These instruments provided objective and reliable data, insight into the prevalence of mental health related problems as well as their drivers. The results are likely to offer insight into the development of mental health policies and practices such as those that relate to assessment and intervention of mining industry workers.

### **S96: Mining Worker Physiological Wellbeing: A Focus on Reproductive Health**

Céline Larivière<sup>1,2</sup>

<sup>1</sup>Laurentian University, Sudbury, Ontario, Canada, <sup>2</sup>Centre for Research in Occupational Safety and Health, Sudbury, Ontario, Canada

Mining is an industry that draws on the skills and knowledge of workers from a wide variety of professions and trades involved in all aspects of mining from exploration, mine development and operations, decommissioning and land rehabilitation. In Ontario, more than 16,000 people were directly employed in this industry in 2011 and approximately 36% of those employed in the mining sector were in operations within the Sudbury region. In 2011, 85-90% of those

directly employed in the mining industry were men and 10-15% were women. In terms of the age profile, 15% of employees were aged 55 and older (14% in 2004), 58% were between 35 and 55 years of age (68% in 2004) and the younger cohort aged 35 years and younger shifted-up from 18% in 2004 to 27% in 2011.

Over the years, the safety of workers in the mining industry has improved. According to statistics from Workplace Safety North, the rates of lost time and medical injuries have declined and significant progress has been made to control health hazards in the mining industry. Despite these advancements, there remain gaps in knowledge regarding the impact of workplace hazards on workers' health in the mining sector and opportunities abound for further evidence-based risk reduction strategies. This is especially true when considering the risk of mining-related work on reproductive and sexual health (RSH). RSH is an important part of occupational health protection for both female and male employees. Discourse on this specific topic comes with a certain level of discomfort and uncertainty for the worker and the employer when considering labour relations and liability issues. A better understanding of workplace risks on RSH achieved through research can help inform strategies to mitigate these risks and alleviate some uneasiness and doubt.

As a first step, researchers from the Centre for Research in Occupational Safety and Health in partnership with the safety organisation, Workplace Safety North, have developed two guidebooks aimed at summarising current knowledge related to the most commonly encountered mine hazards in Ontario underground mines; in particular, where these hazards are encountered in the mining workplace, how they can potentially impact reproductive and sexual health, the developing fetus as well as lactation, and finally strategies and measures to prevent exposures or to keep exposures as low as 'reasonably achievable'. Physical hazards are those primarily linked to work tasks involving noise, vibration and heat whereas chemical hazards include those associated with mechanical extraction of ores and milling, welding, vehicle operation and mine fires. Common ergonomic hazards are those associated with prolonged sitting, scheduling and stress. The main outcomes of these guidebooks will be discussed further during the presentation.

### **S97: Worker Perceptions of Injury and Illness-related Absenteeism in a Canadian Mining Company: Qualitative Findings from a Pilot Study**

Caroline Dignard<sup>1,2</sup>, Michel Larivière<sup>1,2</sup>, Behdin Nowrouzi<sup>1,2</sup>, Zsuzsanna Kerekes<sup>1,2</sup>, Céline Larivière<sup>1,2</sup>, Alain Boulay<sup>1,2</sup>

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Currently, 67% of long term disabilities and 78% of short term disabilities in Canada are due to mental health related issues such as stress, depression and anxiety. These statistics likely vary according to specific industries. Anecdotal evidence suggests that workers in the mining industry have poorer mental health than workers in other industries but to our knowledge, there have been no large-scale efforts to confirm such. The current study presents findings from a pilot project that served as the foundation for a much larger research effort on mining workers (an all-staff survey). The participants in this pilot project were employed in Ontario, Canada by a large international mining company. Beyond assessing the quality and effectiveness of the larger study's instrument (a lengthy questionnaire) and the most effective methodologies for carrying out research for this organisation, the pilot project helped address some of the key objectives of our research program: 1) determining the types of events that most often tend to precipitate worker absenteeism in the mining industry, 2) identifying factors that facilitate a return to work in the mining industry, 3) identifying the most salient obstacles for a return to work for those employed by the mining industry and 4) describing the most promising return to

work strategies for ill and/or injured mining industry workers. To that end, a representative sample of mining workers from various occupational groups were invited to complete the survey and offer feedback in the context of focus group discussions. A subsample of these workers then participated in structured individual interviews to help better understand absenteeism in this industry. The presentation will offer commentary on the usefulness of pilot studies prior to larger-scale survey methodologies and discuss qualitative data relating to workplace absenteeism in the mining sector.

### **S98: Mining Mental Health in Canada: Methodological Considerations**

Behdin Nowrouzi<sup>1,2</sup>, Zsuzsanna Kerekes<sup>1,2</sup>, Caroline Dignard<sup>1,2</sup>, AJ Boulay<sup>1,2</sup>, Céline Larivière<sup>1,2</sup>, Michel Larivière<sup>1,2</sup>

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This presentation will provide an overview of the collaborative nature of this project and the methodological challenges that surfaced in its completion (a mixed-methods sequential explanatory design). Data was collected by way of questionnaires as well as focus groups and individual interviews with employees of a large mining company (Ontario, Canada). The qualitative portion of the project offered a better understanding of the quantitative data and explored workplace mental health and well-being topics in greater detail.

First, we conducted a pilot study at five Ontario worksites. By invitation, 40 respondents completed the questionnaire. The pilot permitted for methodological and instrumental testing and evaluation. The pilot study underlined the importance of identifying a heterogeneous sample of the workforce with quantifiable inclusion criteria (e.g., equitable gender representation). The pilot helped market participation in the larger study and fostered a sense of ownership in its success.

Recruitment challenges were anticipated, discussed and potential strategies implemented given the diversity of the workforce and the sensitive nature of some of the questions. For instance, the topics of the qualitative interviews were provided to participants prior to the interview. In order to maximize participation, each of the company's worksite had a local champion who worked closely with the research team to promote and foster a conducive environment for the completion of the survey. Throughout the study, the company's communication department furnished regular updates to all staff about the value of their participation and the collaborative nature of this project.

Once pilot testing was completed, data collection began with a cross-sectional survey that examined the state of mental health of the entire workforce. Approximately 4,000 participants were invited to complete the questionnaire and we collected data from a wide cross-section of occupations (e.g., production miners, engineers, geologists, scientists, administrators, etc.). Several sampling strategies were considered including a stratified random approach. However, given the amicable and collaborative relationship between all stakeholders, an all-staff survey was employed to maximize participation in the project. Participants were invited to complete one self-administered questionnaire. Paper (rather than electronic) copies of the survey were used to enhance participation at various sites (e.g., surface, underground, corporate etc.) and to decrease privacy concerns (e.g., electronic transmission of confidential information from an online survey). The company allowed respondents to complete the survey during work hours and at the workplace.

During the pilot study, focus group discussions were conducted. This portion of the study allowed for feedback on the instrument and the methodologies to be used in the study.



Participants were then invited to take part in qualitative interviews regarding work absenteeism and return to work issues. Participants were informed prior to their participation (in the information letter) of the topics that would be discussed during the interview.

### **S99: Mapping Latent Variable Models of Mine Worker Health and Well-Being**

Aj Boulay, Michel A. Larivière

*Laurentian University and Centre for Research in Occupational Safety and Health (CROSH), Sudbury, Ontario, Canada*

We present descriptions of new tools that may be used in evaluating Latent Variable Models of Mine Worker Health and Well-Being. Latent variable models have often played an important role in the development of psychological theory. We examine the data obtained in this large study of Mine Worker Health and Well-Being using Deep Learning networks designed to evaluate latent variable models. With the goal of decoupling explanatory factors, we apply Deep Learning networks to this large dataset. We suggest that these novel approaches will improve the scientific modeling of natural variations that occur in the world, allowing researchers to track these changes. Importantly, by using such deep networks to evaluate latent variable models, we will better identify important factors in mine worker health and well-being, especially in the context of large datasets.

### **Symposium: Resilience in the Workplace: How Personal Resources Contribute to Resilience and Psychological Well-being**

Chair: Roman Soucek<sup>1</sup>

Discussant: Magdalena Bathen<sup>2</sup>

*<sup>1</sup>Friedrich-Alexander-Universität Erlangen-Nürnberg, Nürnberg, Germany, <sup>2</sup>University of Kassel, Kassel, Germany*

Today's workplaces are characterized by high demands that put well-being of employees at risk. In this context, resilience plays an important role. Resilience is a buffering factor that reduces the impact of stressful working conditions, and therefore, ensures psychological well-being of employees. In particular, resilience describes the process of an adaptive response, which helps to recover from adverse events. Though resilience is a process of positive adaptation, the current research defines and operationalizes resilience mainly as a stable personal resource. This disparity raises several questions that are addressed in this symposium. In particular, the presentations provide evidence on the contribution of personal resources and how they promote a positive handling of adverse events, namely resilience.

The first presentation by Soucek, Pauls, Ziegler and Schlett explicitly makes the difference between resilience as a personal resource and resilient behaviors in the workplace that actually describe the process of positive adaption and recovery from adverse situations. This study identifies different facets of resilient behavior and outlines their impact on psychological well-being. Furthermore, the study presents evidence for the interaction of personal resources and resources in the workplace with regard to the facilitation of resilient behavior. The second presentation by Bathen demonstrates that resilience as a personal resource is indeed related to positive work related outcomes (e.g., task performance, personal initiative and organizational citizenship). In more detail, the study argues that resilient persons are characterized by a specific regulatory focus that in turn helps to overcome obstacles in the workplace. The third presentation by Clauss and Hoppe builds on the stressor-detachment model and accordingly demonstrates the crucial role of psychological detachment, which mediates the relationship between workload and psychological well-being (i. e., emotional exhaustion). Again, personal resources, in this particular case occupational self-efficacy, contribute to a positive adaptation process, namely psychological detachment.

Overall, the symposium provides insights into how resilience results from the interplay between personal resources and the working context (cf. Pangallo, Zibarras, Lewis, & Flaxman, 2015). The notion of resilience in terms of specific behavior provides a promising starting point for the design of interventions that aim to foster resilience in the workplace, and therefore ensure psychological well-being in stressful times.

### **S100: Resilience as a Personal Resource and Facets of Resilient Behaviour in the Workplace**

Roman Soucek<sup>1</sup>, Nina Pauls<sup>2</sup>, Michael Ziegler<sup>1</sup>, Christian Schlett<sup>2</sup>

<sup>1</sup>*Friedrich-Alexander-Universität Erlangen-Nürnberg, Nürnberg, Germany*, <sup>2</sup>*Albert-Ludwigs-Universität Freiburg, Freiburg, Germany*

This study addresses resilience as an important factor that ensures psychological well-being of employees. In particular, we make the difference between resilience as a personal resource and resilient behaviours in the workplace, which actually describe the process of positive adaption and recovery from adverse situations in the workplace. This distinction between personal resources and resilient behaviour was addressed with two studies.

The aim of a first study was the development of a questionnaire that assesses resilient responses to adverse situations in the workplace (N = 80). The results of factor analyses identified and confirmed four facets of resilient behaviour: emotional coping, positive reframing, comprehensive planning, and focused action. Correlations with existing resilience measures support the validity of the instrument. Further analyses provide evidence that resilient behaviour contributes to psychological well-being over and above personal resources like occupational self-efficacy and mindfulness.

In a second study with employees (N = 1055), we assessed participants' personal resources (occupational self-efficacy, mindfulness, and optimism), different facets of resilient behavior in the workplace, workplace demands and job control as well as psychological well-being. The results reveal the importance of resilient behaviour for psychological well-being. In particular, the positive effect of occupational self-efficacy on emotional exhaustion is partially mediated by resilient behaviour (i. e., positive reinterpretation). Furthermore, the impact of personal resources on resilient behaviour depends on the resources at the workplace, that is, the influence of occupational self-efficacy is stronger in case of higher job control.

Overall, the results highlight the importance of resilience as a personal resource as well as resilient behaviour in the workplace. The different facets of resilient work behaviours provide a promising starting point for the design of interventions that aim to foster resilience, and therefore ensure psychological well-being in stressful times. However, further research is needed in an occupational context that takes different dependent measures into account (i.e., work engagement).

### **S101: Resilience at Work: The Role of Regulatory Focus**

Magdalena Bathen, Sandra Ohly

*University of Kassel, Kassel, Germany*

Resilience is the ability to bounce back from adversity and to continue with normal functioning in difficult situations. It is associated with a positive outlook to the future. Resilience is a buffering factor decreasing the impact of stress and increasing positive work related outcomes. However, the way in which resilience is able to buffer strain reactions remains unclear. In order to address this question, we take regulatory focus theory into account. Regulatory focus theory



posits that people have two distinct self-regulatory foci. On the one hand, promotion focus is associated with growth and development needs, while on the other hand, prevention focus is related to security needs and the prevention of losses. People usually show a tendency toward either one of the two foci, resulting in a trait regulatory focus.

Resilience has its theoretical background in the broaden-and-build theory (Fredrickson, 2001). According to this, resilient people are more likely to experience positive emotions, which in turn broaden ones' awareness and encourage novel and exploratory thoughts. Therefore, we expect resilient people to have a stronger tendency towards promotion focus, in order to focus on gains when overcoming obstacles.

We collected questionnaire data in an organization providing services for people with special needs with 223 participants. 61% of the participants were female, with an average age of 51. We tested multiple mediation models with task performance, personal initiative and organizational citizenship as outcomes, and regulatory focus as mediator. We analyzed the data with SPSS using the process macro by Hayes, which allows for bootstrapping. Our results show greater positive work related outcomes for resilient people. Other than expected, this relationship is mediated by prevention focus. Promotion focus did not show any significant results. These results will be further analyzed with longitudinal data.

Although unexpected, the stronger tendency towards prevention focus for resilient people might be due to a rather conservative way of thinking. Some researches define resilience as conservative, because people have a central focus on bouncing back, instead of opting for change. Our research supports this notion and extends the knowledge on resilience by taking regulatory focus theory into account.

One limitation of the study is the specific population, which gives restrictions towards the generalizability of the results. Therefore, the results should be replicated in a more general population.

### **S102: The Mediating Role of Psychological Detachment and Occupational Self-efficacy among Employees with High Autonomy and Highly Flexible Working Hours**

Elisa Clauss, Annekatrin Hoppe

*Humboldt University Berlin, Berlin, Germany*

The aim of this study was to investigate the mediating role of psychological detachment in the relationship between workload and emotional exhaustion among employees with high autonomy and highly flexible working hours. Furthermore, our aim was to investigate how occupational self-efficacy moderated the relationship between workload and psychological detachment; and, in turn, on emotional exhaustion in a moderated mediation model.

At three points of measurement with an overall time lag of eight weeks, 259 employees filled in a questionnaire. The employees worked on average 44 hours per week ( $SD = 6.47$ ), 52% of them were female and on average 40 years old ( $SD = 10.34$ ), 75% lived in a partnership and 26% had children. All analyses were conducted with the SPSS PROCESS Macro for mediation and moderated mediation by Hayes (2013).

Results reveal a significant indirect effect of workload on emotional exhaustion through psychological detachment. Against expectations, our moderated mediation analysis revealed no buffer effect of occupational self-efficacy. However, exploratory analyses showed that occupational self-efficacy mediates the effect of workload on psychological detachment.

The findings are in line with the stressor-detachment model by Sonnentag and Fritz (2014) who claim a mediating effect of psychological detachment in the interplay of work stressors and strain. However, against the model's proposition, occupational self-efficacy does not buffer this relationship. Instead, workload depletes occupational self-efficacy, and in turn decreases psychological detachment. We therefore conclude that employees with highly flexible working hours need to learn strategies that help them handle stressors in order to avoid that personal resources such as psychological detachment and occupational self-efficacy are depleted and present a potential training program.

### **Symposium: Assessing and Addressing the Psychosocial Factors that Impact the Workplace**

Chair: Arla L. Day

*Saint Mary's University, Halifax, Nova Scotia, Canada*

Given the ability of psychosocial factors, such as psychosocial support, to significantly impact the workplace and worker health, not only is it important to identify factors, but it also is essential to examine how they express themselves, and how organizations can assess, and ultimately address, these factors. The four papers will focus on the cycle of assessing and addressing these factors in terms of (1) identifying the psychosocial factors that may have the greatest impact; (2) examining how psychosocial factors can impact relationships at work; (3) evaluating validated assessments of key factors, and (4) assessing interventions aimed at addressing these issues.

- (1) In the first presentation, the authors present a systematic review of the evidence on the psychosocial and organizational factors that impact the workplace and worker health. Their review compiles evidence from meta-analyses and Swedish data to draw conclusions about the factors that may have the greatest impact on the worker health.
- (2) The focus of the second presentation is looking at what happens to supervisory relationships after an unresolved strike. The authors examine data from a healthcare setting where employees are working without having reached a resolution between the nurses union and the healthcare corporation. This presentation highlights how psychosocial factors can impact key relationships in the workplace.
- (3) The third presentation focuses on validating the Guarding Minds at Work (GM@Work) Survey, a tool for assessing psychosocial factors that impact organizational and individual health. Both the factors structure of the GM@Work and its predictive capacity is examined. The authors specifically assess whether the GM@Work reliably assesses the work environment, supervisor support, workload management, and psychological health factors and whether these factors predict critical outcomes such as discrimination, anxiety, and work engagement.
- (4) In the final presentation, the authors examine weekly data from a phone-based coaching program designed to help employees identify resources to address the demands between their work and home responsibilities. The authors examine the trajectory of improvement on health indices by looking at weekly measures of work and home stress and satisfaction, work-life balance, and well-being. Results are compared to program content and process to examine their impact on overall program success.

Together these presentations provide a holistic view of identifying psychosocial factors to illustrate their impact on worker health, in order to help validly assess these factors, and ultimately toward the goal of helping organizations address the impact of these factors.

### **S103: Organizational Factors, Psychosocial Work Environment, Gender, and Health: A Systematic Review**

Magnus Sverke, Petra Lindfors, Helena Falkenberg, Göran Keckund, Linda Magnusson Hanson

*Stockholm University, Stockholm, Sweden*

Despite a focus on healthy work, occupational health problems are increasing among gainfully employed women and men. Specifically, stress-related mental health problems have increased rapidly and are nearing figures for musculoskeletal disorders. Typically women report more health problems than do men and are, in Sweden as in other countries, overrepresented when it comes to sickness absence due to mental health problems. However, these statistics reflect a gender segregation of the labor market in that some occupations and sectors where women constitute the vast majority also are the ones being most at risk. It is striking that employees within education, health care and social services have the highest risk for various health problems. Besides these sectors mostly employing women, they are often characterized by a work environment that constitutes a risk factor for mental ill-health and poor well-being.

This presentation reports findings of a systematic literature review for the Swedish Work Environment Authority. The review aims to clarify how organizational and psychosocial factors at work relate to various aspects of health. It also aims to identify similarities and differences between women and men but also between sectors dominated by women and men, respectively, when it comes to organizational factors, psychosocial factors, and health. The review was based on a systematic search of the main databases over the past ten years, where the main input was represented by meta-analyses focusing on a variety of health-related outcomes. Our review considered organizational factors such as work hours, employment contract, organizational change and fair treatment from management. Given the wide range of psychosocial factors that have been identified as determinants of health, we organized these factors in terms of demands (e.g., time pressure, role conflict, emotional demands, job insecurity) and resources (e.g., control, feedback, social support, clear goals) at work, thus underscoring the need to balance demands at work with adequate resources. The review focused on a wide range of health-related indicators, including work-related attitudes and behavior, mental health (e.g., well-being, anxiety, depression, burnout), physical health (e.g., cardiovascular diseases, musculoskeletal problems, physical health complaints) along with sickness absence and work-related injuries.

Illustrating how the organizational and psychosocial factors relate to different health-related outcomes, rather than identifying the most salient predictors of any specific outcome, the review contributes to an understanding of factors at work that generally can be beneficial or detrimental to employee health and well-being. The gender perspective can guide future efforts on how to come to grips with a vertically and horizontally segregated labor market and contributes to an increased awareness of the organizational and psychosocial circumstances that shape occupational health in women and men.

### **S104: The Impact of an Unresolved Nurses' Strike**

Arla Day<sup>2</sup>, Michael Leiter<sup>1</sup>

<sup>1</sup>Acadia University, Wolfville, NS, Canada, <sup>2</sup>Saint Mary's University, Halifax, NS, Canada

Strikes in the workforce are an interesting phenomenon because their essential purpose is to cause disruptions in order to send a message to the organisation that certain demands are not being met. An effective strike is one that demonstrates that without the striking employees the work being done by the employer will be ineffective. Commonly strikes occur by employees who are part of a union such as Nurses. In Canada, health-care is highly unionized, with 83%

of nurses belonging to a union (Briskin, 2012). When nursing staff go on strike the intention is to prove to their employers, governing bodies, and the public that without them healthcare will not run smoothly and that their demands need to be met for them to be able to return to work and to be able to work in an effective manner. Nurses may strike for a number of reasons but common reasons found throughout the literature are wages and staffing ratios (Briskin, 2012). During the implementation of an online survey of hospital employees at four Canada health districts, the nurses in one of the four districts commenced a legal strike. After a few weeks, the provincial government passed back-to-work legislation, ending the strike. The survey was suspended for the duration of the strike and recommenced when the employees returned to work. This event created a quasi-experimental study in which the participants in the striking district were the intervention group and those in the other three districts were the controls. The design was not at all random.

**Participants:** Participating organisations were four healthcare districts in Eastern Canada. Participants included first-line managers (FLMs; N=157) and frontline staff (N=1624). Burnout was measured with the 16-item Maslach Burnout Inventory-General Scale (MBI-GS; Maslach, Jackson, & Leiter, 1996) assessing exhaustion, cynicism, and efficacy. Incivility was measured with the 12-item Straightforward Incivility Scale (Leiter & Day, 2013) that included three subscales: supervisor, coworker, and instigated incivility. Workgroup Civility was measured with the 8-item CREW civility scale (Osatuke et al, 2009). Three items from a scale developed by Edmondson (1999) measured psychological safety. Coworker trust and supervisor trust were each measured with three items from the trust subscale developed by Cook and Wall (1980).

**Results:** Overall the strike was associated with a decrease in collegiality. The change from before to after the strike was especially evident for first line managers. Those in the striking health district reported an increase in coworker incivility and subordinate incivility after the back-to-work process. The control health districts reported a steady level of civility and incivility over this period.

**Discussion:** Results are discussed in the context of collegiality in the context of labour disputes with consideration of implications for work engagement and burnout.

### **S105: Validation of the Guarding Minds @ Work Survey: A Tool for Assessing Psychosocial Factors in the Workplace**

Aleka MacLellan<sup>1</sup>, Dan Bilsker<sup>2</sup>, Merv Gilbert<sup>2</sup>, E. Kevin Kelloway<sup>1</sup>

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The current research aimed to validate the Guarding Minds at Work (GM@Work) Survey, a tool for assessing psychosocial factors at work, developed by Samra, Gilbert, Shain, and Bilsker (2009). Specifically, this survey assesses factors (e.g., psychological support) that impact organisational health, the health of individual employees, and the financial bottom line. The purpose of these studies was two-fold: (1) to examine the factor structure of GM@Work; and (2) to assess its prediction of positive (e.g., engagement) and negative (e.g., depression) outcomes. Data was collected from two samples (N = 6894 in Study 1; N = 4307 in Study 2). Both samples consisted of Canadian employees across a nationally representative sample of industries and geographical regions.

In Study 1, participants completed the GM@Work Survey, as well as measures of anxiety (Generalized Anxiety Disorder Scale-2; Skapinakis, 2007), depression (Patient Health Questionnaire-2; Kroenke, Spitzer, & Williams, 2003), and work engagement (Samra et al.,

2009). In Study 2, participants completed the GM@Work Survey in addition to items on workplace harassment and discrimination, as well as stigma surrounding mental illness (Samra et al., 2009). Using Mplus software (Muthén & Muthén, 2013), the factor structure of the GM@Work Survey was analyzed through Exploratory Structural Equation Modeling (ESEM) in Study 1 and Confirmatory Factor Analysis (CFA) in Study 2 (Asparouhov & Muthén, 2009; Kelloway, 2015; Marsh et al., 2009). Both studies found that a four-factor structure provided a good fit for the data (Hu & Bentler, 1999; Tabachnick & Fidell, 2001).

Furthermore, the results of Study 1 demonstrated that work environment, supervisor support, workload management, and psychological health factors significantly predicted employee anxiety, depression, and engagement. Additionally, Study 2 found that workplace harassment was significantly predicted by work environment, supervisor support, and psychological health factors; discrimination was significantly predicted by work environment and psychological health factors; while supervisor support was the only factor that significantly predicted stigma towards mental illness. This research aligns with the mandate of the National Standard of Psychological Health and Safety (CSA Group & BNQ, 2013) authorized by the Mental Health Commission of Canada (MHCC). The purpose of this voluntary standard is to help employers of all sizes, and in all sectors, promote mental health and prevent psychological harm (MHCC, 2012). Accordingly, human resource professionals, managers, and supervisors can use GM@Work to assess psychosocial factors in the workplace, undertake appropriate interventions, and measure the effectiveness of their actions.

### **S106: The Road To Success: Evaluating Weekly Progress in the ABLE Program**

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Employee well-being should be a primary concern for organizations. Canadian statistics suggest that 1 in 4 workers report being highly stressed, while 6 in 10 of these workers cite their work as the main source of their stress (Statistics Canada, 2010). European statistics are similarly concerning; stress is reported to affect 22% of EU workers (EU-OSHA, 2005). There is a clear need for interventions to address this need, and for research that is designed using rigorous methods that provide the opportunity for the evaluation of not only the outcomes of an intervention, but also the process of how interventions lead to success – or not (Nielson, Taris, & Cox, 2010). The current research aims to evaluate some of the process for two iterations of a phone-based the Achieving Balance in Life and Employment (ABLE) Program. The ABLE program is aimed at improving employee well-being through an individually tailored phone-based coaching program that focuses on goal setting and improved coping skills.

Participants ( $N_{ABLE1} = 116$ ,  $N_{ABLE2} = 105$  at week1) were recruited to take part in the ABLE program. Throughout the 10- and 12- week iterations of the program participants completed weekly single item measures of their work stress, home stress, work satisfaction, job satisfaction, their sense of overall well-being, and their sense of balance between the work and other responsibilities. Additionally, participants completed longer measures of stress, strain, work engagement, and work-life balance that were measured at four times across a 12-month period.

In order to examine the process effects of the ABLE program on participant well-being a series of paired t-tests were conducted to determine at what stage in the program significant improvement in outcomes start to emerge. Results demonstrate that the trajectory of improvement was dependent on the outcomes. For the first 12-week iterations of the ABLE program significant improvements were found for work and home satisfaction, work-life balance, and well-being. Many of these improvements began to immerge as early as week 2 of

the program. For the second 10-week iteration of ABLE significant improvements in job and home stress were seen as early as week two of the program, where other outcomes such as home satisfaction, well-being, and balance emerged later in the program around weeks 5-6.

The current research extends past research by focussing on the factors that are responsible for the success of interventions, and highlighting where additional resources could be implemented to create more successful individual well-being interventions. This research highlights the benefits of multiple measurement occasions both in terms of examining the maintenance of intervention effects, and to help examine how these effects initially manifest.

### **Symposium: Presenteeism: Moving the Field Forward**

Chair: Gail Kinman

*University of Bedfordshire, Luton, UK*

The term 'presenteeism' refers to situations where people continue to attend work although they feel sufficiently unwell to take time off sick. There is evidence that such behaviour is increasing and considerable costs for health, wellbeing, and job performance have been identified. Compared with absenteeism, however, little systematic research has yet examined this issue and the research that is available is fragmented. This symposium comprises five papers that examine novel aspects of presenteeism: all of which have potential to move the field forward. The papers offer a critical analysis of conceptual and theoretical issues, and provide an overview of the state of current knowledge on the antecedents and outcomes of presenteeism and how they can best be assessed. Empirical research that has examined presenteeism and the associated concept of "Leaveism" in different occupational contexts drawing on a range of models and methodologies is also presented. Interventions to raise awareness of presenteeism and its potential consequence and gaps in knowledge and future research priorities are also considered.

Paper 1 proposes a mediation model with sickness presenteeism as a determinant of job satisfaction via affective-motivational states. The model offers an extension to the literature on sickness presenteeism by viewing presenteeism as psychological absence, and suggesting that it can affect affective-motivational states (i.e. work engagement, work addiction, and job satisfaction). Although mindless task performance may be possible for some minor tasks, it depletes the capacity and attention necessary to carry out a job well which has an impact on affective motivational states (specifically engagement with work and addiction to work) and can lead to further health impairments in the longer term. Avenues for developing the area conceptually are offered. Paper 2 considers the implications of presenteeism due to mental health problems from the employer's perspective. The direct and more indirect costs to organisations of disorders such as depression and anxiety to productivity are examined and the paper reviews the methods and measures that are available to assess presenteeism and outcomes such as functional impairment, productivity and performance. Criteria for the selection of measures to identify the costs of presenteeism due to mental health problems are also considered.

Papers 3 to 5 explore aspects of presenteeism in a range of employment contexts characteristics of the job and/or the individual may encourage employees to continue to work while unwell or to use their leave to recover from sickness. Paper 3 utilises an expanded job demands-resources model to consider the role of workload in predicting presenteeism in academic employees. It further examines the moderating effects of job control and social support as potential resources that may discourage working while sick and engagement in work as a risk factor for such behaviour. The implications of presenteeism for recovery processes and wellbeing and job performance are also examined. Paper 4 considers the novel concept of



"leaveism," whereby employees use allocated time off (such as annual leave and banked flexi-hours) to recover from illness. Research with UK police is utilised to examine leaveism and the extent to which employers are aware of the potential impact of the practice on wellbeing and performance is considered. The final paper (Paper 5) draws on qualitative data obtained from UK prison officers to explore the reasons why they work while sick and the implications for health and job performance. Several themes emerged from the data including punitive sickness systems, pressure from management, letting colleagues down, fear of dismissal, and duty. The symposium will conclude with a short discussion of the implications of the findings of the papers and priorities for future research.

### **S107: Sickness Presenteeism as Psychological Absence: A Mediation Model of Presenteeism as a Determinant of Job Satisfaction via Affective-Motivational States**

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Sickness presenteeism, or the phenomenon of attending work whilst being ill and unfit to attend due to health reasons, has been described as extremely costly. Research has tended to focus on either its determinants or, less frequently so, on its outcomes. Outcomes that have been examined include costs to organizations in financial terms, costs to individuals in health terms, and impact on future sickness absenteeism. However, research has neglected to examine how sickness presenteeism itself can further impact on attitudinal and motivational outcomes.

In this study, sickness presenteeism is viewed as physical presence combined with psychological absence, or performing work mindlessly, and propose a mediation model of sickness presenteeism as a determinant of job satisfaction via affective-motivational states. Specifically, our model centres on the effort to remain psychologically present at work (despite illness that limits work capacity) that can impact on performance and a range of work-related outcomes. Although mindless task performance may be possible for some minor tasks, but it depletes the capacity and attention necessary to carry out a job well, which has an impact on affective motivational states (specifically engagement with work and addiction to work) and can accumulate into further health impairments in the longer term.

A cross-sectional survey study was conducted with a sample of office workers from three organizations in England. The mediation model posits presenteeism as impacting on job satisfaction via its impact on work engagement and addiction to work. Bootstrapped mediation analysis of the survey data provided support for full mediation model, which explained a total of 48.07% of the variance in job satisfaction. Specifically, the data provided support for the hypothesis that work engagement and addiction mediate the relationship between presenteeism and job satisfaction. The effects were positive via work engagement and negative via work addiction: Presenteeism fuels work addiction, which is in turn linked to job dissatisfaction, and can also reduce work engagement, which is in turn positively related to job satisfaction.

The model offers an extension to the literature on sickness presenteeism by viewing presenteeism as psychological absence, and suggesting that it can affect affective-motivational states (work engagement, work addiction, and job satisfaction). This study offers avenues for developing the area conceptually.

### **S108: The Cost of Presenteeism due to Mental Health Disorders from the Employer's Perspective: How to Choose the Appropriate Evaluation Tool**

Helene Sultan-Taïeb<sup>1</sup>, Manon Lévesque<sup>1</sup>, Michel Vézina<sup>2</sup>, Chantal Brisson<sup>2</sup>

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As shown in the health economic literature, depression and anxiety are associated with high presenteeism costs (on-the-job productivity losses) as compared to other health conditions. Moreover, presenteeism costs increase with depression severity. Several authors insist on the need to include reduced work performance because of depression in cost-benefit analyses of prevention interventions aimed at improving employee's mental health condition. The objective of this presentation is to analyse methods and instruments used to estimate presenteeism production losses and monetary costs due to anxiety and depression from the employer's perspective.

A literature review was conducted, focused on a list of available instruments (13) specific to mental health disorders over the 1995-2015 period : Endicott Work and Productivity Scale, Functional Status Questionnaire Work Performance Scale, Health and Labor Questionnaire, Health and Work Performance Questionnaire, Health and Work Questionnaire, Health-Related Productivity Questionnaire Diary, Quantity and Quality method, Stanford Presenteeism Scale 13, Work and Health Interview, Work Limitations Questionnaire, Work Productivity and Activity Impairment Questionnaire, Worker Productivity Index, Work Productivity Short Inventory. Psychometric evidences have been analysed such as construct validity, reliability (reproducibility, internal consistency). The wording of items used to measure production losses quantitatively has been compared as well as the duration of the recall period. The characteristics of population samples included in studies have also been analysed (general population or population from a specific occupational group).

The results of our analysis show a wide diversity of instruments, which contributes to a large discrepancy in costs estimates in the literature. The number and quality of available psychometric tests vary a lot from one instrument to the other. Furthermore, instruments can be categorized according to their conception of presenteeism outcomes: a measure of production during illness as compared to usual production, a measure of time required to compensate for time lost because of illness, or an indirect calculation of production losses based on a measure of limitations or impairment.

No clear recommendation could be made on the most appropriate instrument that should be chosen to measure presenteeism costs at work due to depression and anxiety. Several criteria should be taken into account when making this choice: study design (cross sectional or longitudinal), target population, type and severity of mental disorders, perspective of the study (employers or societal), availability of validated translation. More high quality studies on this topic would be most useful to develop common standards for the evaluation of presenteeism costs.

### **S109: Predicting Presenteeism in Academic Employees: Risk and Protective Factors**

Gail Kinman, Siobhan Wray

*University of Bedfordshire, Luton, UK*

There is evidence that academic employees in the UK and other countries have experienced a rapid increase in work intensity. Longitudinal studies have identified increasing demands and role stress and reduced autonomy in the sector, as well as growing problems with mental health. As well as increasing workloads, previous research has also found that academics tend



to be deeply involved in their work which can encourage overload and reduce recovery opportunities that, in turn, can threaten wellbeing. We argue that academics may be particularly inclined to engage in presenteeism due to the demanding nature of their job and a reluctance to disengage from it - even when unwell.

As yet, the organisational and individual difference factors that discourage presenteeism have been little examined. Moreover, although there is evidence that working while sick can threaten the health of employees, little research has considered its implications for recovery from work demands and psychological wellbeing. This study utilised an extended job demands-resources framework to predict presenteeism in a sample of academic employees. The role of job demands was considered and the moderating effects of job control, social support and work engagement explored. It was predicted that control and support would be protective resources in the relationship between job demands and presenteeism, whereas job engagement would be a risk factor. The implications of working while unwell for recovery processes and psychological wellbeing were also considered.

An online survey was completed by 5,209 academic employees (55% female) working in UK universities. Validated measures were used to assess job demands, control, manager and peer support as well as work engagement, recovery and emotional exhaustion. A high level of presenteeism was reported in that than half of the sample felt under pressure to work while sick often or always. Positive relationships were found between presenteeism and work demands and engagement, whereas negative associations were observed with control and support from both managers and peers. The model explained 32% of the variance in presenteeism, with demands, control and manager support making particularly strong contributions. Evidence was found that job control might protect academic employees from working while sick under conditions of high job demands, whereas a high level of engagement with the job role appeared to be a risk factor for presenteeism. Working while sick was also strongly associated with impaired recovery and emotional exhaustion. The implications of presenteeism for the wellbeing and performance of academic employees are considered.

### **S110: Presenteeism in UK Prison Officers: A Qualitative Analysis**

Gail Kinman, Andrew Clements, Jacqui Hart

*University of Bedfordshire, Luton, UK*

Presenteeism refers to situations where workers continue to attend work although they feel sufficiently unwell to take time off sick. Organisations may initially view presenteeism more positively than absenteeism, but its longer-term costs are increasingly recognised. It is argued that the factors that encourage presenteeism and its impact on individuals and organisations will, to a large extent, depend upon the occupational context. It is therefore crucial to gain insight into the reasons why people continue to work while sick and the implications for wellbeing and job performance in different occupational groups - particularly those that are safety-critical.

Studies of prison officers have found high levels of job-related stressors and strains. Moreover, prisons in the UK are increasingly overcrowded and understaffed and the incidence of violence and aggression has risen dramatically. Prison officers work interdependently, are responsible for the welfare of prisoners and are required to be vigilant for long periods. Continuing to work while sick therefore has serious implications for the safety of officers, their co-workers and the prison population. This study examined the extent to which respondents engaged in presenteeism and the reasons why they continued to work while sick. Thematic content analysis was utilised to explore data from open-ended questions that formed part of a larger survey of the prison sector.

Data were obtained from 1,682 UK-based prison officers (85% male). Eighty-four percent of prison officers reported being under pressure to come into work when unwell at least sometimes, with more than half (53%) always feeling such pressure.

Thematic content analysis explored the reasons provided for presenteeism and following themes emerged: punitive systems (e.g. a strong 'anti-sickness culture' within many prisons); pressure from management (e.g. contact from managers at an early stage in sick leave episodes to 'encourage' staff back to work); letting colleagues down (e.g. where officers worried about overloading their co-workers if they took time off sick); staff shortages (e.g. where taking time off sick might threaten the safety of others); fear of dismissal (e.g. feelings of vulnerability about having a 'poor sick record' and subsequent job loss) and duty (e.g. a sense of moral obligation and commitment to the job). Additional themes encompassed fears that claims of sickness may not be believed by management or colleagues, or may be considered insufficiently serious to warrant taking time off. Anticipatory shame, where colleagues might gossip about people who were off sick, was a further reason provided for presenteeism. The implications of the findings for the wellbeing and performance of prison officers will be discussed.

### **Symposium: Psychosocial Safety Climate: How Organisational Contexts Can Protect Worker Health and Promote Productivity - Part 1: Qualitative and Quantitative Evidence of PSC Theory**

Chair: Tessa Bailey

Discussant: Maureen Dollard

*University of South Australia, Adelaide, Australia*

Psychosocial safety climate (PSC) theory (Dollard & Bakker, 2010) defines the organisational context preceding the development of work conditions that lead to poor employee health and reduced productivity. PSC incorporates elements of safety climate, ethical leadership, and job stress theory and provides a top-down and bottom-up approach towards managing organisational psychosocial risks factors. This symposium will provide a comprehensive overview of new cross cultural qualitative and quantitative evidence demonstrating how PSC acts as a leading indicator of psychosocial factors at work, worker health and productivity.

Part 1 of the symposium focuses on the – Qualitative and quantitative evidence of PSC theory. A major argument is that PSC extends job stress theories. A study involving 850 Australian employees' across 119 organisations will be presented by Mikaela Owen that investigates whether PSC can extend the well-known Effort-Rewards Imbalance (ERI) model as a precursor. Mikaela will present evidence showing how PSC predicts ERI at the organisational and individual level. Low individual and organisational ERI, in turn, facilitate workers' experiences of depression, psychological distress, emotional exhaustion, and poor general health. This paper provides evidence in support of PSC as a 'cause of the causes'. Understanding the intricacies of how PSC manifests in the workplace and impacts on worker health, safety, and engagement is the aim of a qualitative paper by Sarven McLinton of Australian front line health workers. Semi-structured interviews with workers from three hospital sites in South Australia will be examined regarding the importance given to physical safety climate and PSC, and prospect for organisational vs individual focused change in the future.

'Saying and doing' is an important issue for PSC. A diary study will be presented by Maureen Dollard which involved 545 diary data points across five consecutive days from 109 secondary school teachers in 23 schools in Selangor, Malaysia. Hierarchical Linear Modeling will be presented to show how espoused PSC (what senior managers say) and enacted PSC (doing - daily management support), work together to impact on worker engagement and emotional exhaustion. PSC mean levels have been exclusively investigated to date, but what about PSC

strength (Average Deviation (ADM))? Do PSC level and PSC strength interplay to impact on psychosocial risks such as job demands and health outcomes such as distress? A paper will be presented by Mikaela Owen using Hierarchical Linear Modelling to test whether PSC level is a better predictor of psychosocial risks and psychological distress when attenuated by PSC strength.

### **S111: Psychosocial Risk Surveillance in Australia and the Effort-Reward Imbalance Model**

Mikaela Owen, Tessa Bailey, Maureen Dollard  
*University of South Australia, Adelaide, Australia*

In Australia, we are witnessing rising costs associated with psychological stress in terms of compensation claims and productivity loss. Contributing towards workers' experience of psychological stress is psychosocial factors in the workplace, such as efforts and rewards, and organisational level risk factors, such as psychosocial safety climate (PSC).

To understand the threat to workers' psychological health and productivity, the current paper aims to extend the Effort-Reward Imbalance model (ERI) to incorporate PSC theory amongst Australian workers. Using the surveillance tool, the Australian Workplace Barometer (AWB), we analysed 850 employees within 119 organisations.

We found that high PSC linked with individual perceptions of low ERI, as well as low organisational ERI. Low individual and organisational ERI, in turn, facilitated workers experience of depression, psychological distress, emotional exhaustion, and poor general health. However, only individual perceptions of low ERI related to poor workplace engagement and job satisfaction. The research demonstrates the extension of the ERI model incorporating PSC theory, in which PSC triggers the process from poor workplace conditions (high effort and low rewards) to poor worker psychological and physical health, and poor workplace outcomes.

### **S112: Psychosocial Safety Climate in Frontline Healthcare: A Qualitative Study**

Sarven McLinton, Maureen Dollard, Amy Zadow, Michelle Tuckey  
*University of South Australia, Adelaide, Australia*

**Introduction:** In work health and safety legislation greater focus has been afforded to physical rather than psychosocial hazards (Productivity Commission, 2010). Although this attention has aided the prevention of injuries arising from physical hazards (e.g. see; Christian, Bradley, Wallace, & Burke, 2009; LaMontagne, Keegal, Valance, Ostry, & Wolfe, 2008; Leka, Jain, Cox, & Kortum, 2011), current policy has failed to account for the importance of the psychological aspects of health and safety. Psychosocial Safety Climate (PSC; Dollard and Bakker, 2010) can be used to evaluate an organisation's propensity for employees to be exposed to psychosocial hazards (Bailey & Dollard, 2015). The healthcare workforce is known for both extensive physical and psychological demands and pervasive negative health outcomes. The present study investigates the complex nature of PSC in frontline healthcare workers using qualitative data. The healthcare industry in Australia has been targeted for workplace injury reduction from 2012-2022 in the Australian Work Health and Safety Strategy (SWSA 2012).

**Methods:** Semi-structured interviews were conducted with frontline healthcare workers (N = 27) from three sites of a healthcare network in South Australia. Participants had a diverse range of occupations (e.g., registered nurses, allied health, medical professionals) and included frontline employees as well as varying levels of management. Interviews ranged from 20 to 120 minutes (M = 30 min), and the interviewer loosely followed 9 pre-set questions.

Results: Interview data showed a noticeable trend in participants recognising a profound difference between the physical safety climate and the psychosocial safety climate in their team. Workers cited that while management values their physical safety, psychological safety takes a back seat. Whilst participants recognised the multiple layers of influence on worker health (External factors -> Organisational factors -> Job design -> Individual), they still cited that the strategies for dealing with challenges on the job occur predominantly at the individual level (e.g., building individual coping skills in the face of complex organisational, cultural, and job design issues). There was little confidence in tackling systemic issues via changing the approach of management toward valuing worker psychological health as equal to productivity goals. Despite this, some participants recognised that a change in climate would be necessary, and that PSC is created at all levels.

Discussion: The importance of studying PSC as the 'cause of causes' has been demonstrated in previous quantitative studies, for example poor organisational climate for psychological health can be a precursor to harassment and violence, which in turn leads to higher levels of compensation claims (Bailey, Dollard, McLinton, & Richards, 2015). Results indicate that workers at all levels recognise the importance of a shift in management values and actions from short-term profit to instead the long term protection of psychological health and the development of high PSC and the potential to reduce the negative individual and economic impact of hazardous outcomes of low PSC. However whilst desirable, frontline staff are not optimistic about this change occurring in senior management "driven by budgets and quotas".

### **S113: Climate Congruence: How Espoused and Enacted Psychosocial Safety Climate Affect Emotional Exhaustion and Work Engagement**

Yulita<sup>1</sup>, Maureen Dollard<sup>2</sup>, Mohd Awang Idris<sup>1</sup>

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The alignment between espoused (saying) and enacted (doing) psychosocial safety climate (PSC; a climate for worker psychological health) is important to consider in relation to health and work outcomes. This diary study explored the boundary conditions of espoused PSC (organizational Level PSC), a distal antecedent of work-related psychological ill-health (i.e., daily emotional exhaustion) and motivation (i.e., daily work engagement) respectively. In all, 545 diary data points were collected within five consecutive days from 109 secondary school teachers across 23 schools in Selangor, Malaysia.

Using Hierarchical Linear Modeling (HLM), in a three level model we found alignment between espoused PSC and enacted PSC (daily management support), as a predictive positive relationship. In turn the expected relationship between espoused PSC and work engagement was mediated by enacted PSC. For emotional exhaustion, enacted PSC moderated the negative relationship between espoused PSC and daily emotional exhaustion. The expected beneficial effects of espoused PSC on emotional exhaustion were evident when levels were aligned with those of enacted PSC within schools. When considering emotional exhaustion, PSC acts as a safety signal - when high espoused PSC is coupled with repeated, unequivocal and stable support (enacted PSC), employees may feel safe to take action to reduce threatening demands.

These findings offer new insights regarding how managers can build PSC, by valuing employee psychological health, and translating PSC into action (integrity in saying and doing), to increase psychological health and work engagement.

# **S114: Psychosocial Safety Climate and Climate Strength: Main and Interaction Effects on Organisational Change and Psychological Distress**

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Psychosocial Safety Climate (PSC) is an emerging model based on well-known organisational theories like Job Demands-Resources (JD-R) model. PSC mainly focuses on managerial strategies for employees' health and safety at work. It is considered an antecedent of job demands and resources, which consequently affect employees' health and work outcomes. Investigations of job demands and psychological distress to date have been largely conducted in terms of PSC level (mean), yet PSC strength (Average Deviation (ADM)) may also play a role. PSC Strength (ADM), is a new approach and refers to variability or dispersion of work group perceptions towards PSC. When workers in the same organisation have not much variability in perceptions we expect that PSC would show a strong negative relationship to job demands and psychological distress. When there is low agreement we expect that the effect of PSC level is not as strong. High PSC strength (low variability) could play an important role as a consistent and more reliable predictor of psychosocial risk factors in interaction with PSC levels, than PSC levels alone. A population based random sample of Australian workers (N = 625) from 66 different organisations completed the Australian Workplace Barometer (AWB). Hierarchical Linear Modelling (HLM software) was utilised to analyse the survey results. PSC level and PSC strength were correlated  $-.42, p < .01$  but not so high as to suggest a systematic range of restriction. It also indicated that PSC level and PSC strength are separate constructs and that ceiling effects are not problematic. The primary results showed that PSC level was a better predictor of organisational change compared to PSC strength. However, a significant interaction effect of PSC level and strength was found in relation to both outcomes. The lack of effects in relation to the PSC strength may be due to the nature of the national population based sample -participants are clustered by organisations but they are often geographically quite dispersed, and the variability within groups .. Future studies should continue to investigate PSC strength at the team level.

## **Symposium: Psychosocial Risks and Employee Well-being: Total Worker Health Policy Implications**

Chair: Jeannie AS Nigam

*NIOSH, Washington DC, USA*

The United States has seen a slight increase in the rate of fatal and non-fatal occupational injuries in the past year (BLS, 2015). The U.S. population is becoming increasingly unhealthy as evidenced by increased incidence of chronic health problems and the prevalence of mental health problems. Work-related stress remains a top occupational risk to worker health, ranking above physical inactivity and obesity (Towers Watson, 2013). Workers themselves report that financial concerns and work are the two top sources of stress in their lives (APA, 2015).

The economic and social climate, changes in tools and technology, shifting employment contracts, long work hours, as well as the availability and characteristics of the workers themselves all contribute to how work is designed and how employees perceive work. Despite rising concerns around financial pressures and occupational stressors, workers with social support are better equipped to manage competing demands and are less likely to engage in unhealthy behaviors as a way to cope with demands (APA, 2015). When designed with all aspects of worker health in mind, work can provide support in a number of valuable ways that each contributes to overall well-being. For example, work provides a sense of purpose, a means for financial support, and a social and creative outlet, among many other benefits.

To realize the full potential of work as a contributor to well-being, any risks at the worksite must be properly managed and, where possible, removed altogether. However not all risks are visible and can be addressed with physical or environmental changes alone. Heavy workload, lack of support, low organizational justice, poor supervision, work-life imbalance, job insecurity, and shift work or long work hours require interventions that may involve human resources, management, organizational development, training, and perhaps even employee assistance programs. Employee health and behavioral risks may be addressed by health promotion / wellness, employee assistance, and/or occupational health professionals. Integration among these programs, that is, of occupational safety and health protection with workplace policies, programs and practices has been a long-standing interest of the scientific community (Sauter 2013) and researchers have argued for taking an ecological or systems approach to occupational safety and health (McLeroy et al. 1988, DeJoy & Southern, 1993). The premise is that worker injury and illness have myriad causes and, therefore, require coordinated interventions that consider workers' individual and occupational risk factors. With the emergence of attention to, and funding for Total Worker Health research, scientists have begun investigating the merits of coordinated approaches. Recently, researchers conducted a systematic review of interventions and found that integrated health protection and health promotion interventions that address injuries and chronic diseases simultaneously can improve workforce health effectively and more rapidly than those employing a limited focus.

Presenters will provide an overview of occupational stress in the U.S., describe how key stressors can be addressed using a Total Worker Health framework, and will present a study on the business value for paid sick leave as an example of a policy that can benefit employee health, well-being and the organization.

### **S115: Quality of Worklife and Health in the U.S.**

Naomi Swanson

*NIOSH, Cincinnati, OH, USA*

Statement of the Problem: Surveys show that the average levels of stress have decreased in recent years. However, work remains the second most commonly reported source of stress, second only to financial concerns. Americans report that stress interferes with their sleep, eating patterns, and efforts to achieve their well-being goals, and that their levels of stress are higher than what most consider "healthy" (APA, 2015). This presentation will summarize findings from four administrations of the U.S. Quality of Worklife (QWL) survey.

Procedures / Analyses: The QWL is the only national survey of workers in the U.S. that tracks facets of work organization and their association with health and safety outcomes. The QWL is administered by the National Opinion Research Center (NORC) as part of the General Social Survey (GSS) and is designed to measure how work life and the work experience have changed over time.

The data are being analyzed using descriptive statistics and regression analyses to report on the prevalence of workplace psychosocial risks in the United States workforce and how those risks contribute to worker physical health, mental health and overall well-being. We are addressing risks that emanate at the job level (i.e., workload, skill utilization, repetitive motions, resource adequacy), organization level (i.e., training, layoffs, safety & health), reflect psychosocial interactions (i.e., teamwork, fairness) and outcomes that could be traditionally described at the individual level (i.e., general health, sleep quality, injury) but which also have implications for, and affect outcomes of interest to organizations (i.e., performance, satisfaction, commitment, intent to leave).



**Preliminary Results:** Preliminary results confirm that work organization and psychosocial aspects of work remain a significant hazard for workers across the United States and have consequences for employee injury, physical health, and mental well-being. There is some indication that industry (e.g., healthcare, construction, transportation) and the type of employment contract (e.g., contract or permanent work) represent increased risk for stress. Around 20% of workers report that work frequently interferes with their ability to manage family demands. Despite high levels of stress, most workers are generally satisfied with their work. Those who report that their managers are highly committed to workplace safety are more satisfied than those who report lower management commitment to safety. Further investigation will identify which facets of work organization contribute most strongly to job satisfaction and organizational commitment.

**Practical Implications / Conclusion:** Better understanding of how work organization risk factors affect propensity for stress, and its associated poor health outcomes, will shed light on the mechanisms by which work affects health, safety, and well-being. Most importantly, investigation of this comprehensive set of variables will provide direction for addressing common stressors using a Total Worker Health framework for comprehensive interventions that protect worker health and safety while also promoting well-being.

### **S116: The Business Value of Paid Sick Leave**

Abay Asfaw, Roger Rosa, Rene Pana-Cryan  
*NIOSH, Washington DC, USA*

**Statement of the problem:** The percentage of U.S. workers with access to paid sick leave in the private sector is low and there is wide variation across industries, firm size, and occupations. Employers in the U.S. are not required by law to provide paid sick leave for their employees which may explain some of this variation. There is limited information on the economic return of providing paid sick leave. The present study provides empirical evidence on the business value of paid sick leave and estimates its net monetary benefit to employers.

**Procedures/Analyses:** We hypothesized that the net benefit of paid sick leave to employers in terms of reduction workers' turnover of nonfatal workplace injury and could outweigh its costs. We used nationally representative data from 2008 to 2012 from the National Health Interview Survey, the Medical Expenditure Panel Survey, and the Bureau of Labor Statistics and other publically available sources to estimate the incidence and costs to employers of turnover and nonfatal injuries among employees with and without access to paid sick leave, and to compute the net benefit of paid sick leave to employers.

**Preliminary Results:** The random effects logit analyses with adjustment for selection bias showed that paid sick leave decreased the odds of changing jobs voluntarily by 22%, keeping all other covariates constant. This suggests that providing paid sick leave could help employers reduce the number of job turnovers by 1.2 million and save between \$13.11 and \$26.11 billion in turnover costs. The propensity score matching results suggested that providing paid sick leave could reduce the probability of nonfatal injury by 0.2% and save between \$7.36 and \$20.94 billion per year by reducing nonfatal workplace injuries.

**Practical implications/Conclusion:** Providing paid sick leave can create a large business value for employers. These findings might persuade employers to consider paid sick leave as an investment rather than as a cost without any return.

## **S117: Total Worker Health Implications for Addressing Occupational Stress**

Jeannie Nigam

*NIOSH, Cincinnati, USA*

Background: Recent United States Census of Fatal Occupational Injury data reflect a 2% increase in fatal occupational injuries in 2014 over 2013 fatal work injuries (Bureau of Labor Statistics, 2015). Meanwhile, workers report frequently experiencing occupational stress, have difficulty managing competing demands from work and other spheres of their lives, and around 10% report experiencing depression (Goetzel et al., 2012). U.S. workers increasingly struggle with one or more chronic health problems such as overweight or obesity, high cholesterol, diabetes, or high blood pressure, all of which can be exacerbated by behavioral risks such as being physically inactive, using tobacco, or abusing alcohol, and can confer increased risk for acute occupational injury (Kubo et al., 2014). Experiencing common work stressors such as high demands, long work hours or job insecurity can directly increase the risk of poor health by 35 - 50% (Goh et al., 2015).

Consideration of the myriad of risks facing workers today and their interactive effects on health and well-being raises awareness of the need for an approach that tackles multiple risks at once, preferably with emphasis on prevention of future risks as well as treating and modifying existing risks. The National Institute for Occupational Safety and Health (NIOSH) in the U.S. Centers for Disease Control and Prevention has created a program on Total Worker Health to advance research, intervention, and outreach activities that protect worker safety and health, preserve our human resources, and promote worker well-being. Issues relevant to advancing the safety, health and well-being of workers through Total Worker Health include control of hazards and exposures, organization of work, built environment supports, new employment patterns, changing workforce demographics, compensation and benefits, leadership and culture of work, and work and community interaction.

Approach and Summary: Total Worker Health is an occupational safety and health strategy that reflects integration of policies, programs, and practices that protect against work-related safety and health hazards with those that promote injury and illness prevention efforts in order to advance worker well-being (NIOSH, 2015). Put simply, Total Worker Health is coordination of separate organizational environmental, health, and safety policies, practices and programs spanning the continuum of approaches that prevent work-related injuries and illnesses and enhance the overall health and well-being of the workforce (Sorensen et al., 2013). Workplace interventions are designed through collaborative processes that include leaders from a range of organizational programs, include input and engagement from employees, and are supported by management at multiple levels.

During this presentation, the audience will learn more about the Total Worker Health approach and its applicability to addressing work organization concerns. After presenting the rationale for integrated approaches and giving a brief overview of the program components, the speaker will consider primary models of stress and draw upon scientific evidence to describe how to address some of the most common occupational stressors from a comprehensive, Total Worker Health perspective.

### **Symposium: Leadership – Gaining Shared Understanding in Interventions**

Chair: Henna Hasson<sup>1</sup>

Discussant: Christine Ipsen<sup>2</sup>

<sup>1</sup>Karolinska Institutet, Stockholm, Sweden, <sup>2</sup>Technical University of Denmark

Key stakeholders such as senior and middle managers as well as employees can potentially impact organizational intervention's implementation and outcomes. Understanding the viewpoints of these stakeholders may offer useful knowledge on how these actors drive and shape intervention processes. In fact, the importance of exploring the roles, behaviors,



intervention perceptions and involvement of these actors has been emphasized in prior studies from occupational intervention field (Nytrø et al., 2000, Nielsen and Randall, 2013).

The concepts of sense-making and shared perception has emphasized as essential for understanding different organizational actors' reactions and activities in a change process. Sense-making involves processes by which people give meaning to an experience such as a coming change or an occupational intervention. Shared perceptions refer to the phenomena that individuals at workplace may have different perceptions of a same phenomenon, since they vary in experiences, personality, skills, and values (Harrison, Price, Gavin, & Florey, 2002; Riordan, 2000). Prior research implies that leaders and their subordinates are particularly prone to forming differing perceptions about different phenomena at their workplace (Bass & Yammarino, 1991; McCauley & Lombardo, 1990). Power differentiation and distinct work context of leaders at different organizational levels and sub-ordinates can create different sense-making about organizational phenomena (Beus et al., 2012, Patterson et al., 2004).

The overall aim of this symposium is to further the knowledge on how shared perception among key organizational stakeholders can be created and what consequences lack of shared understanding can have on outcomes of organizational interventions. In addition, strategies and activities for gaining shared understanding are presented.

The symposium starts with a short overview of the research in the field presenting models and studies about leadership and shared perceptions. This will give the audience a good knowledge of what have been done in this field both theoretically and empirically. Thereafter, the four presentations show how the latest studies in this area have investigated shared perceptions between managers at different organizational levels and between line managers and their subordinates. The session concludes with comments from our discussant as well as questions and discussion with the audience.

### **S118: The Concept of Leader-Team Perceptual Distance and its Consequences for Employee Outcomes**

Susanne Tafvelin<sup>1,2</sup>, Ulrica von Thiele Schwarz<sup>2</sup>, Henna Hasson<sup>2</sup>

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Background and aim: Individuals who work together often vary in their experience, personality, skills, and values (e.g., Harrison et al., 1998) and may have different perceptions of the same phenomenon in a workplace. Distance in perceptions can occur between members of a team, but prior research has shown that teams and their leaders were particularly prone to forming differing perceptions (e.g., Bass & Yammarino, 1991). Gibson et al. (2001) proposed a model for studying perceptual distance between leader and their subordinates. They focus on team cognitive processes and argue that leader-team perceptual differences are detrimental to team performance because these differences hinder the team from maximizing collective cognition and reaching its full potential. Differences in leader-team perceptions causes misunderstandings that distract the stakeholders and consume resources (e.g., time, energy, possibly even capital) that could otherwise be applied directly to achieving performance objectives. Recent studies have confirmed that high disagreement between leader and employees is related to teams' lower levels of work outcomes such as employee health, work performance and work satisfaction. The purpose of the present study was to continue the study of consequences of leader-team perceptual distance by examining the relationship between leader-team perceptual distance regarding organizational learning and employee rated work performance.

**Method:** The study is set in a Swedish forest industry company with approximately 800 employees. All the company's 101 line managers were asked to answer a questionnaire and to invite five subordinates to the questionnaire. The final sample consisted of 68 managers, of these 82.4% were men, with a mean age of 47 years. The employee sample consisted of 209 individuals; 85% were men, the mean age was 46 years. Organizational learning was measured from both managers and employees perspective with the short version of the DLOQ (Yang et al., 2004). Employee performance was measured with employee self-ratings with a single item from the HWQ (Shikier, Halpern, Rentz, & Khan, 2004). We followed the four step procedure for analysis of polynomial regression with response surface analysis outlined by Shanock (2010) which is the recommended form of analysis for studying leader-team perceptual distance.

**Results and Discussion:** Polynomial regression analysis showed that three of the organizational learning scales; dialogue and inquiry, team learning, and embedded system explained significant variance in work performance. We plotted the findings from the polynomial regression to interpret our results. For dialogue and inquiry the findings suggest that when managers and teams perception were in agreement, teams' ratings of work performance increased. For team learning and embedded systems the findings suggest that when managers' ratings are higher than their teams, work performance decreases. Our results suggest that leader-team perceptual distance is meaningful concept that explains variance in employee performance over and above that of employee ratings alone and that leader-team perceptual distance offers a new potentially important avenue of research to pursuit. To organizations, paying attention to differences in perception between leaders and their teams is important to ensure best possible levels of employee performance.

### **S119: Does it Matter if We Agree? Leader – Team Perceptual Distance in Organizational Interventions**

Henna Hasson<sup>1</sup>, Ulrica von Thiele Schwarz<sup>1</sup>, Karina Nielsen<sup>2</sup>, Susanne Tafvelin<sup>1</sup>

<sup>1</sup>Karolinska Institutet, Stockholm, Sweden, <sup>2</sup>University of East Anglia, Norwich, UK

Level of shared understanding among key stakeholders in work groups have shown to have a great impact on team well-being and organizational performance (Fleenor, Smither, Atwater, Braddy, & Sturm, 2010; Gibson, Cooper, & Conger, 2009). Prior research implies that work teams and their leaders may be particularly prone to forming differentiated perceptions. The literature about leader – team perceptual distance suggests that agreement levels between leaders and their team ratings is crucial for team well-being and performance (Gibson et al., 2009). The presentation aims to investigate how agreement levels between leaders and their work team at baseline affect the development of the intervention outcomes over time.

The empirical case was a leadership-training intervention (101 managers) aiming to improve beside leadership also organizational learning climate. Longitudinal design with pre-(November 2011) and post-intervention (March 2013) measurements were used. Perceptual distance was calculated for the organizational learning climate scales at baseline was measured from the leaders and their subordinates perspective (n= 290 staff members). Organizational learning climate was measured with the short version of the Dimensions of Organizational Learning questionnaire (Yang, Watkins, & Marsick, 2004). The improvement of the organizational learning variables to post intervention was evaluated with polynomial regression analysis with response surface analysis.

The general pattern of the results was that organizational learning climate improved when leaders and their teams agreed on the level of organizational learning before the intervention. The improvement in organizational learning climate was highest when the leader's and the team's perceptions at baseline were aligned and high rather than aligned and low. The development of outcomes over time was lower when the leader's perceptions were higher than the team's perceptions at baseline.

These results give insight into both statistical and conceptual possibilities of perceptual distance in organizational intervention evaluation. It is suggested that these measurements could be used prior to an intervention in order to feedback the results for teams and leaders. This would enable them to reflect and discuss issues related to their possible differentiated perceptions of the organizational variables and the intervention before starting the intervention activities. It is possible that their agreement levels would improve which could offer them opportunities to avoid misunderstandings and use intervention catalysts such as evaluation and performance feedback to efficiently improve work practices. That would also offer a workplace leader opportunity to take better advantage of intervention opportunities to break habits and to develop the team wellbeing and performance.

### **S120: Levels of Leadership - Engaging Senior Management and Line Managers in Organizational Interventions**

Maria Karanika-Murray, Dimitra Gkiontsi

*Nottingham Trent University, Nottingham, UK*

The aim of this study was to examine the role of the leaders for implementing organizational interventions. Past research concurs that active and visible leadership engagement is an essential ingredient in the intervention implementation process. However, because different leadership levels have different functions, roles, and spheres of influence (Minzberg, 1979; Karanika-Murray et al., 2015), it is important to distinguish between the senior management team (SM) and line managers (LM) when attempting to develop a shared understanding and engagement among leaders with an intervention.

Semi-structured interviews were carried out with seven intervention champions in two large organizations in the UK (one local council and one health care organization). The interviews focused on how the SM and LM leadership levels' engagement with the interventions, their responses to the intervention aims and plans, and how the intervention team dealt with any barriers in engaging leaders in the interventions. Follow-up interviews were carried out to expand on some of the responses.

Thematic analysis of the data resulted in seven themes and 18 subthemes. In summary: Although both levels of leadership were consulted, both formally and informally, SM were the first in hierarchy to be approached by the intervention team, whereas LM tended to be informed initially via the SM and then at group meetings. In terms of immediate reactions, LM tended to be more cautious about the aims of the interventions and the potential value that they could add or disruptions to day-to-day work (due to their operational role), whereas SM tended to be consistently more positive (due to their strategic role). Reasons for initial negative reactions to the intervention plans were more varied among LM than among SM, which may indicate a more unified understanding of the organization's strategic direction and needs by SM and more diverse roles, experiences, and knowledge among LM. The factors that can affect leader engagement with an intervention fall into three categories: communication, attitudes, and impact on operational work. SM and LM's understandings of the interventions differed mainly because of the differences in power and influence that each of these roles have. Finally, it took longer to commit LM than SM to the intervention aims and plans. The two main factors that affected the time required to get LM commitment were whether there was commitment from SM and what the impact on operational work would be, whereas SM tended to get on board quite quickly because of their access to direct and regular updates about the interventions.

A number of recommendations are offered for securing a shared understanding and engaged action of leaders at different hierarchical levels who are involved in organizational interventions. It is important to take advantage of the organizational hierarchy, to cascade influence from higher to lower leadership levels, to show sensitivity to leaders' perspective and expertise, and to tailor communications on the intervention to different leadership levels according to their role.

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### **S121: Sense-Making and Management: Why First-Line Managers Get Different Results in Organizational Interventions**

Christine Ipsen, Liv Gish, Signe Poulsen

*Technical University of Denmark, Kgs. Lyngby, Denmark*

The overall aim of the current study was to investigate the outcomes associated with the PoWRS (Prevention of Work-related Stress) program including a range of methods designed to involve employees and managers in the development and implementation of a work-related stress prevention intervention. The intervention was undertaken in four Danish knowledge intensive (KICs) and small and medium sized enterprises (SMEs). During the intervention, our study showed that the first line managers approached the implementation of the intervention activities in different ways leading to different results. The aim of this paper is to investigate how the first-line managers and their department implemented the program and why they reached different results.

**Method:** The PoWRS program includes a number of fixed collective activities to be conducted and offers a "blue print" of the intervention process. Yet, the content of the supporting activities are based on the in-house needs, knowledge and capabilities just as the goal of the intervention reflects the needs of the workplace. The managers and employees in each case consequently, partake in the whole intervention, where they, in a collective and collaborative process, re-design their work practices and organizational design and implement the changes. The research team followed the intervention process in all four companies by observing the planned activities and progression of the interventions at onsite visits. At the end of the intervention, the companies evaluated the intervention in a Chronicle Workshop.

**Analysis and results:** In two of the companies, a handover of commitment and responsibility from top management to first line management succeeded regarding the aim and goal of conducting the intervention. In the two other companies it failed. In the successful cases the first line managers embraced the responsibility and stayed loyal to the intervention model. Our preliminary analysis shows that first line managers see the intervention as an opportunity to address some of their existing challenges and thereby frame the uncertain situation as meaningful. Consequently, they associate the intervention activities with the daily operations, objectives and KPIs. In the companies with the least implementation success, we observed that the first line managers failed in committing to the project. These managers prioritized daily operations rather than the intervention despite allocated resources and top management's attention. One explanation could be that they could not make sense of the intervention and consequently saw it as meaningless. Another explanation may be that they were working managers, meaning that they also had to bill hours and saw themselves less as leaders and project managers of the intervention. Our findings suggest that besides allocation of resources and top management support, the first line managers responsible for the implementation have greater success if they can make sense of the intervention and make a close association with the existing daily operations, objectives and KPIs.

## **Symposium: The Partnership Model for Research in Workers' Health: A Novel Method for Ensuring a Sustainable Working Life**

Chair: Malin Lohela Karlsson

Discussant: Irene B Jensen

*Karolinska Institutet, Stockholm, Sweden*

To adapt to a changing work life and facilitate society's as well as employers' efforts in creating sustainable organizations and a sustainable working life, research design and methods need to be revised. There is an increasing demand for research to be conducted in close collaboration with its target population, i.e. research based on partnership. Interventions that prevent or solve problems need to be developed and implemented, and strategies on how to translate research into practice need to be developed and communicated. Research conducted using this approach differs from traditional research in that it requires fast results/feedback that is relevant and accessible.

One of the challenges in intervention and implementation research targeting worker health is finding the relevant problems that need to be targeted as well as to develop effective interventions that will be used in practice. To succeed it is imperative to take the users' perspective into account and that the interventions are adjusted to the target populations needs. It is also important to translate and communicate research quickly into practice to benefit society. The partnership approach increases the likelihood that the interventions will be implemented and sustainable.

Based on years of experience, a model for practice based research in worker health has been built to facilitate implementation of research into practice. The model is adopted from "Blue Highways" on the National Institutes of Health Roadmap and is called "the Partnership Model for Research in Worker Health". The model builds upon collaboration between researchers and practitioners in all stages of research; from formulating research questions to implementing the results into practice. It includes a number of key components that incorporates the above mentioned success factors. The overall aim of the symposium is to present "the Partnership Model for Research in Worker's Health". The different papers will give a deeper presentation of the overall model, its development as well as its components and how it can be used.

The symposium will consist of four different presentations. The first presentation will present the overall model and its development. The second presentation will present the development of a practice guideline for the occupational health services through a community of practice. The third presentation will present the economic perspective that is integrated into all research conducted within this model. The fourth presentation will present the network and collaborations with community partners, such as clinicians, practices, and organizations, and how we are working together according to the model. Research conducted using "the Partnership Model for Research in Worker Health" is more time consuming and requires more time for communication outside the academic setting than traditional research. However, if properly conducted, it results in increased use of evidence-based interventions in practice through improved effectiveness and utilization of research results, which is a key factor for a sustainable working life.

### **S122: The Partnership Model for Research in Worker's Health**

Malin Lohela Karlsson, Lydia Kwak, Iben Axén, Gunnar Bergström, Lotta Nybergh, Irene Jensen

*Karolinska Institutet, Stockholm, Sweden*

Background: To achieve a sustainable working life there is a need to identify effective interventions for worker health that can be used in practice. Research needs to be translated and communicated more quickly into practice to benefit society. It is important to design

interventions that adhere to the needs of the target group and that work in practice. Research conducted together with end-users requires a different approach than those normally used in research. It requires fast results or feedback, it requires relevancy and accessibility. Research conducted using this model builds upon collaboration between researchers and practitioners in all stages of research; from formulating the research questions to implementing the results in practice.

The aim of this presentation is to present a research model called "the Partnership Model for Research in Worker's Health" that is used to translate research more effectively into practice. This research model has been developed from "Blue Highways" on the National Institute of Health Roadmap.

**Method/design:** Research conducted using the Partnership model differs from traditional research in several ways. Research questions are formulated from contextual needs in collaboration with, for example, occupational health services or a specific workplace. Besides being effective, research interventions also need to be applicable in practice and adopted to organizational conditions. Results need to be fed back fast and easy and be spread using traditional media. This research model is dependent on a well-functioning cooperation with the partners. It requires huge efforts in networking, building trust, arranging joint meetings and educating the users in the intervention, so called "train the trainer". To facilitate this we have established key components that are the base in the partnership model. These are the establishment of an "Academic occupational health services" certification, a prioritization group which, for instance, makes recommendations on important areas where guidelines would be needed, networks, development of systematic reviews as well as occupational health practice guidelines.

**Discussion:** Research conducted in this way requires different skills and approaches from researchers than what are usually necessary. We have to be more visible and be able to communicate research in an easily accessible way. However, it also gives a lot of benefits. Interventions are directly adopted to function in practice, it increases the possibility for valid study results, and implementation and utilization of research result are faster. The challenges and benefits will be brought up and discussed during the presentation.

### **S123: Development of Occupational Health Practice Guidelines: A Swedish Model**

Lydia Kwak<sup>1</sup>, Charlotte Wåhlin<sup>1,2</sup>, Kjerstin Stigmar<sup>3,4</sup>, Ulric Hermansson<sup>1</sup>, Christina Björklund<sup>1</sup>, Irene Jensen<sup>1</sup>

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**Introduction:** There is an interest for implementing evidence-based practices (EBP) within the occupational health services (OHS) in Sweden, both from the perspective of OHS professionals and employers of customer companies who are responsible for financing the OHS. In order to facilitate EBP in the OHS, our unit at Karolinska Institutet in collaboration with the Swedish Occupational Health Association (SOHA) initiated the development of OHS practice guidelines. The guidelines are developed by multidisciplinary groups, consisting of representatives from OHS, researchers and SOHA. This study describes the development process and content of the guideline on low back pain (LBP). Furthermore, the ongoing work of developing guidelines for 1) health screening at the workplace, 2) management of mental disorders, and 3) alcohol consumption, will be presented.

**Methods:** The development process started in 2012 by forming a multidisciplinary group. The group met regularly 3 times/semester, during a period of 1.5 year. Between meetings, the group had assignments to progress in the process. During the meetings presentations were given by experts in the field on, among others, implementation, EBP, assessment methods and evidence-based interventions. Based on these presentations, literature in the field, group-work and discussions, the guidelines were developed following recommendations of existing handbooks on guideline development. The development process was evaluated by questionnaire and observation. The development of the guidelines for Health screening at the workplace and Management of mental disorders was completed in September 2015. The development of the guideline for Alcohol consumption will be completed during the start of 2016.

**Results:** The group developing the LBP guideline consisted of 13 OHS-professionals (physician, nurse, physiotherapist/ergonomist, psychologist, engineer, and health promotion specialist), 3 researchers and 2 representatives from SOHA. Despite a positive overall process evaluation, in which group members indicated to have been satisfied with the development process, several challenges occurred during the process. The recommendations in the LBP guideline were based on existing international guidelines, systematic reviews and adapted to the OHS practice. The guideline is divided into six sections: introduction, flow-chart presented as a figure, assessment, intervention, implementation and appendices. A participatory approach is emphasized to actively involve the employer, the employee and the professionals from OHS. The LBP guideline was launched in January 2014. The development of the other guidelines has followed the same structure as the LBP guideline. The results (content and process) will be presented during the symposium.

**Conclusions:** There is a need to facilitate the translation of research into practice. The approach of using a multidisciplinary group of OHS professionals has shown to be useful for developing practice guidelines. Participants in the groups exchanged experiences and scientific knowledge as well as using existing international guidelines in order to develop the guidelines. However, expectations and prerequisites should be more clearly presented when working with practice guidelines, in order to receive more support from employers to actively participate in development. The guidelines recommend a participatory approach, involving the employer in the assessment and adjustments of workplace and work task.

#### **S124: Integrating Economic Perspectives into the Partnership Model for Research in Worker Health - Presentation of a Tool for Engaging Employers in Workplace Interventions**

Malin Lohela Karlsson

*Karolinska Institutet, Stockholm, Sweden*

**Background:** Interventions with the aim to create a sustainable working life are often conducted at workplaces and paid by the employers. Important incentives for employers to engage in workplace interventions are both legal, economic, ethical and moral. Those influenced by economic incentives often want to know more about the relationship between work environment, employee health and how it affects economic outcomes at the concerned company. They are also interested in current costs of illness and work environment problems, as well as in the return on the investment for interventions conducted. Knowledge on economic aspects will result in increased engagement in workplace interventions. Economic evaluations of workplace interventions are not only requested in research, but also by those performing these interventions in practice. This increases demands on economic tools that could be applicable in practice.



As part of the "the Partnership Model for Research in Worker Health", an economic perspective is integrated into all research conducted within this model. The aim of this presentation is to present how the economic perspective is integrated into the research and how economic evaluation tools are developed together with practitioners.

Method: The economic perspective that is integrated into all research conducted within the Partnership Model for Research in Worker Health includes several different approaches. For example, we always calculate the cost of illness for different health and work environment problems, evaluate the effect of interventions on both health and productivity outcomes, and perform economic evaluations from a societal as well as employer perspective. Furthermore, we develop economic evaluation tools for the practice guideline for the occupational health services. All of the above are done in collaboration with a multidisciplinary group of practitioners. The group develops tools that are useful in practice and that could be used as an argument for further engaging employers in interventions. The economic part of the model and the development process of the economic tool will be presented during the symposium.

Discussion: Economic evaluations and calculations of ill-health and work environment-related problems made from an employer perspective are still often lacking in research despite the importance of economic incentives for increased investments in workplace interventions. An improved use of the economic perspective in addition to the intervention research already conducted is therefore important to support a sustainable working life.

### **S125: Practice-Based Research Networks - Strengthening the Collaboration between Researchers and Target Audiences as Part of a Partnership Model**

Iben Axén

*Karolinska Institutet, Stockholm, Sweden*

Background: One way to facilitate implementation of research is to involve and collaborate with the intended end users of the research results. If clinicians, practices and organisations are involved in all stages of a research project, it ensures that the research topic and hypothesis are relevant, that the interventions developed are tailored to the specific needs of the practise or organisation that it is possible to translate into practice, and that strategies of implementation are developed and communicated. Through years of conducting clinical studies, a model for forming and using practice-based research networks has been described. The overall aim of this model is to facilitate implementation of research into practice. The model builds upon collaboration between researchers and practitioners in all stages of research; from formulating research questions to implementing the results in practice.

Aim: The aim of the presentation is to present our experiences of working with practice-based research networks as part of a partnership model.

Method/design: The presentation will describe the formation, composition and organisation of the network, mode of operation and execution of research projects and the final implementation of the research results.

Discussion: Research conducted using practise-based research networks has the potential to increase the use of evidence-based methods in practice. The model presented is developed and tested through several studies and may be adapted to other settings or organisations.



## **Symposium: Psychosocial Safety Climate: How Organisational Contexts Can Protect Worker Health and Promote Productivity - Part 2: Practical Applications and Macro-level Implications of PSC**

Chair: Tessa Bailey

Discussant: Maureen Dollard

*University of South Australia, Adelaide, Australia*

Psychosocial safety climate (PSC) theory (Dollard & Bakker, 2010) defines the organisational context preceding the development of work conditions that lead to poor employee health and reduced productivity. PSC incorporates elements of safety climate, ethical leadership, and job stress theory and provides a top-down and bottom-up approach towards managing organisational psychosocial risks factors. This symposium will provide a comprehensive overview of new cross cultural qualitative and quantitative evidence demonstrating how PSC acts as a leading indicator of psychosocial factors at work, worker health and productivity.

Part 2 of the symposium focuses on the – Practical applications and macro-level implications of PSC. The substantial evidence identifying PSC as a leading indicator of psychosocial factors at work and their impact on work health and productivity indicates that it is an ideal target for intervention and prevention strategies. To begin this session, a framework including PSC benchmarks and practical tools for psychosocial risk management will be presented by Tessa Bailey.

It is important to estimate the economic cost to employers for sickness absence and presenteeism that is due to psychosocial factors (low PSC, depression, psychological distress, and low work engagement), as a motivator for organisational change. Harry Becher presents a paper estimating these costs using the Australian Workplace Barometer population based data using population attributable risk analysis. Using the PSC benchmarks, low PSC costs Australian employees approximately AUD 6 billion pa, providing a strong economic case for boosting PSC. What about external factors that might influence the development of PSC? What about macro-level effects of PSC? Maureen Dollard will present a paper investigating corruption, a macro-level factor measured by the Corruption Perception Index, for its relationship to PSC as reported by 28649 senior OSH managers across 31 European countries. Multilevel modelling will show that corruption accounts for a sizeable effect (17%) on PSC leadership. Countries with high levels of corruption, showed less PSC, which in turn related to lower worker job control and job satisfaction. The mechanism linking corruption to PSC is argued to be ethical leadership. Last, Amy Zadow presents an important meta-analysis of 235 independent samples (N = 47 000) and explored the relationships between PSC, job demands, job resources, psychological health and work injuries at the organisational, work team, and individual levels. Results support the multilevel nature of PSC as it is related to job demands, job resources, and psychological health at all levels. PSC is therefore a vital factor in psychosocial risk management and an ideal target for promoting better worker wellbeing and productivity outcomes."

### **S126: Psychosocial Safety Climate Framework**

Tessa Bailey, Maureen Dollard

*University of South Australia, Adelaide, Australia*

The innovative Psychosocial Safety Climate (PSC) framework provides a structured approach to understanding and addressing psychosocial risk factors at work. The concept of PSC materialised following evaluation of an organisational intervention program. The PSC-12 scale that was developed has demonstrated how organisational policy, procedures, practices in relation to the protection of employee mental health act as a precursor to psychosocial factors, worker health, and productivity. Benchmarks specify that PSC scores below 37 place workers

at high risk for job strain, depression, sickness absence, and presenteeism, whereas scores above 41 significantly reduces the risk of these poor health and productivity outcomes. Since PSC is a leading indicator of psychosocial factors at work and the associated health and wellbeing outcomes it is the ideal target for prevention and intervention. The concept has been converted into the PSC Hierarchy of Control to further assist practical applications for improving PSC and addressing work related psychosocial hazards. Future implications include development of a PSC based audit tool and action plans.

### **S127: Using Psychosocial Safety Climate to Predict Workplace Productivity Costs**

Harry Becher, Maureen Dollard

*University of South Australia, Adelaide, Australia*

This paper presents an analysis of human capital focussed solutions for improving productivity. Poor psychological health in the workplace costs Australian employers tens of billions of dollars each year via sickness absence and presenteeism. Previous studies have attempted to calculate the cost to employers from untreated psychological health problems, these estimates are often in the order of billions of dollars. Most Australian workers believe that a psychologically healthy workplace is important, and that their own workplace is not psychologically healthy. Poor psychological health prevents workers from applying their knowledge effectively due to absence (e.g. sickness absence) and sub-par performance (e.g. presenteeism). Other methods of improving productivity (e.g. increased work pressure, reducing job control, reducing job rewards) are typically counterproductive due to the flow-on health problems associated with job strain.

We examine four psychosocial factors that can potentially reduce human capital costs, improve psychological health, and increase productivity: Psychosocial Safety Climate (PSC), depression, psychological distress, and engagement. We hypothesised that low PSC, low engagement, depression, and psychological distress would each be related to increased sickness absence and presenteeism. We used interview data from a representative sample of 4204 workers in the Australian Workplace Barometer project.

All four hypotheses were supported. The following national annual productivity cost estimates were calculated using a relative risk Population Attributable Risk analysis attributable to these psychosocial factors, including their total cost (sickness absence cost and presenteeism cost): low PSC, \$6 billion (\$2.4 billion, \$3.6 billion); depression, \$6.3 billion (\$4.4 billion, \$1.9 billion); psychological distress, \$1.0 billion (\$1 billion, n/s); and low engagement, \$5.4 billion (n/s, \$5.4 billion). We also examine the per-worker cost estimates of varying degrees of each psychosocial factor due to sickness absence and presenteeism. Workers in low PSC environments averaged 43% more sick days and 72% higher performance loss in the previous month, costing an average of \$1900 per low-PSC worker annually.

We recommend that employers invest in the psychological health of their workers for a positive return on investment, and policy makers set a policy agenda that improves national productivity growth via enhanced organisational standards for psychosocial safety climate. Our estimates of lost productivity are conservative due to the use of average wages to calculate the cost of low productivity, as a worker's economic input to their employer typically exceeds their income. Due to the cross sectional nature of the study, causal links are unable to be established between the examined psychosocial factors and productivity costs. Future research could improve the measurement of productivity by using objective rather than self-report measures. Other factors that influence sickness absence and presenteeism should also be explored.

## **S128: Crooked Contexts and Ethical Leadership: Exposing Societal Corruption Effects on PSC, Job Control, and Job Satisfaction across 31 European Countries**

Maureen Dollard

*University of South Australia, Adelaide, Australia*

Corruption, the use of publicly entrusted power for personal gain, is a major global threat to democratic processes in society and has a significant effect on national health, well-being and productivity. But how do crooked or corrupt practices in society infiltrate the workplace? We explore this question with the hope of exposing and pushing back the effects of corruption. We argued that ethical leadership, inspired by utilitarian consequentialism, is required for effective occupational safety and health (OSH) management at work particularly as it relates to a climate for worker psychological health (or psychosocial safety climate, PSC). We expected that societal corruption, motivated by egoistic consequentialism, would undermine leadership for PSC, with effects for worker job control and job satisfaction.

Across 31 European countries we measured corruption via the Corruption Perception Index, PSC via reports from 28649 most senior OSH managers, and job control and job satisfaction via reports from 32203 workers. The most senior OSH leaders reported that stress (43%), bullying and harassment (23%), and violence (23%) were a major concern. In reaction, their practices varied by country (24% variance in PSC leadership due to country).

Using multilevel modelling we found that corruption accounted for a sizeable effect (17%) on PSC. Countries with high levels of corruption, showed less PSC, which related to lower worker job control and job satisfaction. Moreover, corruption affected worker uptake of available job control and moderated (reduced) the positive relationship between job control and job satisfaction. Although effects of societal corruption infiltrate organisations, the workplace could provide a site for counter action through building transparency and values-based ethical leadership.

## **S129: Psychosocial Safety Climate Theory Meta-Analysis**

Amy Zadow<sup>1</sup>, Mohd Awang Idris<sup>2,1</sup>, Maureen Dollard<sup>1</sup>

*<sup>1</sup>University of South Australia, Adelaide, Australia, <sup>2</sup>University of Malaya, Kuala Lumpur, Malaysia*

Psychosocial safety climate (PSC) theory (Dollard & Bakker, 2010) defines the organisational context preceding the development of work conditions leading to poor psychological health. In a multilevel meta-analysis of 235 independent samples (N = 47, 000) this study examines the relationship between PSC, job demands, job resources, psychological health and work injuries at the organisational level, at the level of the work team, at the individual level, and the relationships between these levels of analysis. Meta-analytic analysis demonstrated that PSC is related to job demands, job resources, and psychological health at the level of the organisation, the work team and the individual level, and as a between group effect teams with low PSC experienced higher job demands, lower job resources, and increased adverse psychological health outcomes and work injuries. Most current meta-analyses use individual level data. The difficulty with individual level data is that even if extra-individual sources such as workplace psychosocial risks are examined, conclusion are influenced by individual explanations such as common method variance, perception, or mood differences as the reason for the link between work factors and psychological health. Incorporating organisational and team level effects in meta-analysis provides evidence beyond individual explanations. These multilevel meta-analytic findings demonstrate the relationship between PSC, work conditions, health and injuries. Adverse psychological health and workplace injuries may be best prevented with the psychosocial safety climate.

## **Symposium: Participative Prevention of Psychosocial Emergent Risks in Small and Medium Enterprises: Overview of a Collaborative Project**

Chair: Sílvia Silva

*ISCTE - Instituto Universitário de Lisboa, Lisbon, Portugal*

Participative Prevention of Psychosocial Emergent Risks in SME's" (PPPSER) was a one year European Project, funded by the European Commission. The project's main goal was the transference of knowledge on psychosocial risks prevention from the academia to different practitioners working in or with Small and Medium Enterprises (SMEs). Psychosocial risks are defined as the "likelihood that certain aspects of work design and the organization and management of work, and their social contexts, may lead to negative physical, psychological and social outcomes" (OSHA, 2014, p. 10). For example, working at very high speed, doing shift work or the lack of social support at work are considered psychological risks. Considering the recent economic crisis, Portugal, Spain, Italy, and Greece – all countries with a high percentage of SME's in their economy - observed an increase in psychosocial risk factors and are, therefore, relevant countries to invest in risk prevention and management.

The objectives of the project were fourfold. First, it aimed at summarizing the existing scientific knowledge, policies about psychosocial emergent risks prevention, and mapping SMEs knowledge about these risks. Second, the project intended to characterize the best practices in emergent psychosocial risks management and to identify the difficulties/obstacles to implement good preventive practices in SMEs. Next, workshops with stakeholders were organized, in order to disseminate knowledge and define an action plan for helping SMEs in the prevention of psychosocial emergent risks. Finally, the output of the project was the presentation of an informative toolkit with practices that can be implemented by SMEs to help them to prevent the emergent psychosocial risks.

The present symposium presents an overview of the project, the description of the project's activities and main results, as an example of a good cooperation between academia and the practitioners with regard to the prevention of psychosocial risks. It has five presentations. The first 3 presentations describe the qualitative phase of the project, where information was gathered from relevant stakeholders, presenting the process and results of the interviews and focus groups conducted in Spain, Greece and Portugal. Next, an overview of the quantitative data collected in the four countries will be presented. Finally, the last presentation will detail the process of construction of the toolkit in a specific country, Greece.

The presentations of the symposium will open the door for a fruitful discussion of relevant aspects for facilitating the intervention in psychosocial risks in the context of small and medium enterprises.

### **S134: Exploring Psychosocial Risks in Greek SMEs - A Qualitative Study**

Karolina Doulougeri, Katerina Georganta, Anthony Montgomery

*University of Macedonia, Thessaloniki, Greece*

Introduction: Psychosocial risks represent a challenge for modern working environments influencing the organization and its employees at multiple levels related to health, safety and performance. Small and Medium Enterprises (SMEs) are particularly vulnerable to emergent psychosocial risks that are exacerbated due to current socio-economical conditions. The aim of the study was to explore emergent psychosocial risks in Greek SMEs and identify the obstacles to the psychosocial risks and potential solutions.

**Methods:** A purposive sample of participants was recruited from SMEs in the area of Thessaloniki, Greece. Three sectors were chosen to be included in the study: transportation, private education and tourism. In addition, representatives of working units, consultants and health and safety inspectors related to SMEs in the same professional categories were included. All discussions were conducted using a protocol template consisting of questions generated from a literature review on psychosocial risks. Data were transcribed and analyzed using thematic analysis. The analysis involved detailed readings of interview transcripts and initial coding was produced.

**Results:** Sixteen individual interviews and one focus group were conducted. In the individual interviews 8 women and 8 men participated. Three people participated in the focus group. The age of participants ranged from 25 to 73 years. The most frequently reported psychosocial risks included: job insecurity, employability, changes in contract agreements, excessive job demands, long working hours, excessive workload, and work-family conflicts. Other psychosocial risks mentioned included effort reward imbalance, high competitiveness between employees or between SMEs of the same sector that results in excessive pressure in employees for higher performance and a negative working environment.

**Discussion:** The findings of the present study are in agreement with previous studies on the topic of psychosocial risks. The focus by many employers on profit and not creating a healthy working environment, as well as the limited number of inspections by the responsible bodies were mentioned as important obstacles in recognizing and addressing psychosocial risks in SMEs. Suggested solution included the increase of information and awareness of stakeholders regarding psychosocial risks, changes in legislation and highlighting the link between prevention of psychosocial risks and the financial and performance related benefits for the company. The study stressed the importance of interdisciplinary collaboration on preventing and managing psychosocial risks in SMEs and the importance of adjusting any intervention strategy to the specific characteristic of the SME.

### **S135: Psychosocial Risks Prevention – Perspectives from Portuguese SMEs**

Sara Ramos, Patrícia Costa, Sílvia Silva, Ana Passos, Susana Tavares  
*ISCTE - Instituto Universitário de Lisboa, Lisbon, Portugal*

**Introduction:** This paper presents the Portuguese results from the first phase of the PPPSER project, which has a qualitative nature. Micro, small and medium enterprises (SMEs) represent 99.9% of the Portuguese business setting. According to national sources, there are 1,167,811 SMEs in Portugal, with a combined turnover of 220 billion euros. Therefore, the main goal of this phase was to gather data from relevant SMEs stakeholders about what they perceived as psychosocial risks, their main causes and consequences, the general level of awareness about the issue, the main obstacles to prevention and intervention and specific actions developed considering those risks.

**Methodology:** After developing the interview protocol and defining common guidelines for all countries, the Portuguese team conducted 12 semi structures individual interviews and 3 focus group. Data was analyzed through content analysis

**Results:** Although almost interviewees recognized the relevance of this topic for individuals, companies and society, the assessment, management and prevention of psychosocial risks is still unusual, particularly in SMEs. Participants also stressed the importance of disseminating concrete examples of good practices.

**Discussion:** While health and safety is already an integral part of the management philosophy in most SME's, the introduction of preventive actions beyond legal requirements still need improvement. The project revealed a low level of awareness about psychosocial risks, the

almost inexistence of risk assessment practices and a lack of resources for investing in its prevention. To facilitate the change in the prevention practices it is critical to develop resources that organizations could easily use at a low cost.

### **S136: Exploring Emergent Psychosocial Risks in Spain: A Qualitative Approach**

Francisco Bretones, Jose Gonzalez, Antonio Delgado, Rocio Gonzalez

*University of Granada, Granada, Spain*

**Introduction:** Work conditions are an important source of potential health risks. In fact, occupational hazards have become one of the most serious problems now faced by workers and society in general. This is due to the fact that work conditions are now in a state of constant flux as a consequence of the technological, economic, and social transformations and innovations required to competitively adapt to new work situations and scenarios. But current technological and organizational changes and, overall, economic crisis bring to the fore new and emergent psychosocial risks which need to be explored and characterized.

**Methods:** For this purpose, we performed a qualitative study that focused on company owners, managers, union representatives, and workers in small and medium-sized companies. We opted for a qualitative method because we wished to gain a more in-depth knowledge of the nature of psychosocial risks.

**Results:** Result shows that work intensification, technostress, job uncertainty, competitiveness, job instability are some of them. Despite all of these measures business and companies are still reticent about implementing intervention programs to prevent psychosocial risks.

**Discussion:** Employers as well as employees should know them and be informed of the nature of psychosocial risks, their consequences, and the different forms of intervention available. This would be an important stimulus for occupational risk prevention in organizations, which goes far beyond merely complying with regulations.

### **S137: SME's Perspective on Psychosocial Risks – From Identifying to Intervening in Four Countries**

Patrícia Costa<sup>1</sup>, Sara Ramos<sup>1</sup>, Silvia Silva<sup>1</sup>, Ana Passos<sup>1</sup>, Susana Tavares<sup>1</sup>, Francisco Bretones<sup>2</sup>, Antonio Delgado<sup>2</sup>, Karolina Doulougeri<sup>3</sup>, Katerina Georganta<sup>3</sup>, Barbara Giacomini<sup>4</sup>, Jose Gonzalez<sup>2</sup>, Rocio Gonzalez<sup>2</sup>, Anthony Montgomery<sup>3</sup>, Margherita Pasini<sup>4</sup>

<sup>1</sup>ISCTE - Instituto Universitário de Lisboa, Lisbon, Portugal, <sup>2</sup>Universidad de Granada, Granada, Spain, <sup>3</sup>University of Macedonia, Thessaloniki, Greece, <sup>4</sup>Università Degli Studi di Verona, Verona, Italy

**Introduction:** Certain aspects of the work design or the organization as well as the social context of work may lead to negative physical, psychological and social outcomes. These aspects are considered psychosocial risks. Portugal, Spain, Italy, and Greece are facing the biggest consequences of the economic crisis with psychosocial risks being exacerbated. In these countries, small and medium enterprises play an important role in the economy. This paper presents the quantitative data from the project, collected in those four countries. The main goal of the survey was to determine the SMEs' perspective about emergent psychosocial risks, difficulties and concerns related to its prevention as well as to assess their knowledge and existing practices regarding psychosocial risks prevention.

**Methodology:** The survey was developed based on existing surveys for assessing psychosocial risks, as well as on data gathered in the qualitative phase of the project (consisting in interviews with key stakeholders). It was accessible either in an online format or as a paper copy. In total, 154 SME safety and health technicians and workers representatives participated in the study.



Results: Although being an important issue, specific policies, management systems, or action plans on psychosocial risks are rarely found in SMEs. Also, risk assessment is seldom conducted, as it is considered too expensive and time consuming. When risk assessment is conducted, it is usually to comply with legal requirements or requirements from clients as well as over concern about the organization's reputation. In general, participants agree that they need more information to promote risk assessment.

Discussion: While health and safety is already an integral part of the management philosophy in most SME's, the introduction of preventive actions beyond legal requirements still need improvement. The project revealed a low level of awareness about psychosocial risks, the almost inexistence of risk assessment practices and a lack of resources for investing in its prevention. To facilitate the change in the prevention practices it is critical to develop resources that organizations could easily use at a low cost.

### **S138: Developing a Psychosocial Risk Tool for SMEs**

Katerina Georganta, Karolina Doulougeri, Anthony Montgomery  
*University of Macedonia, Thessaloniki, Greece*

Introduction: In the context of the Participative Prevention of Psychosocial Emergent Risks in SMEs (PPPER) project, a toolkit was developed aimed at providing information about psychosocial risks, assessment instruments for diagnosing psychosocial risks and prevention/intervention suggestions. A workshop was organized for interested stakeholders aimed at disseminating the findings of the PPPER project, presenting the toolkit and receiving feedback on its use and exploring further good practices related to prevention and/or management of psychosocial risks.

Methodology: Based on an extensive literature review and the findings of a qualitative study with SMEs owners, human resources managers and occupational physicians working in SMEs, a toolkit was developed. The toolkit followed the principles of the Job Demands Resources model (JD-R) and it consisted of 3 parts: a) an information part regarding frequently encountered psychosocial risks in SMEs (job demands) as well as available job resources b) an assessment part with questions regarding existing job demands and available job resources which could be answered at an individual, department or company level, and c) suggestions for prevention of psychosocial risks or intervention strategies.

Results: Thirty people participated in the workshop, including important stakeholders such as SMEs owners, employees' representatives, health and safety inspectors and occupational physicians. Participants were split in 5 teams and they conducted group activities, including the evaluation of the toolkit as well as assessment and reflection on good practices with regard to prevention or management of psychosocial risks. Participants of the workshop experience psychosocial hazards on a daily basis. Good practices on dealing with job demands and psychosocial risks (e.g., excessive workload, role conflict, job insecurity) were presented by the participants as well as ways to identify and foster job resources (e.g. trust, civility in the workplace). The toolkit provided an easy to use guide for end users, with adequate information and resources to increase awareness and motivation in dealing with psychosocial risks as well as useful material for prevention and intervention strategies. However, participants indicated the importance of customizing all those information to the specific characteristics of every SME and the need for more training/education opportunities of interested end users regarding prevention and intervention strategies.

Discussion: The workshop provided the opportunity for the dissemination of the psychosocial risk toolkit. Main conclusion for the workshop was the need for an interdisciplinary approach in addressing psychosocial risks in SMEs emphasizing the need to adapt any type of intervention to the specific demands and characteristics of the SME.

## **Symposium: Work-life balance**

Chair: Paraskevas Petrou

*Erasmus University Rotterdam, Rotterdam, The Netherlands*

### **S139: Organizational Availability Demands and Work-Life Balance: the Role of Detachment and Length of Information and Communication Technology (ICT) Use**

Clara Heissler, Antje Schmitt, Sandra Ohly

*Universität Kassel, Kassel, Germany*

**Purpose:** This study aims to investigate the role of organizational demands to be available after hours through information and communication technology (ICT) on work-life balance and work-life conflict. Based on the stressor-detachment model (Sonnentag, 2010) we examined if detachment mediates the detrimental relationship between availability demands and well-being in the evening. Since the actual length of ICT use should also influence both outcomes, the mediating role of duration of ICT use is also tested.

**Design/Methodology:** Using a daily diary study design, data were collected online from 93 knowledge workers in Germany who completed a general survey and three daily surveys over a period of 8 consecutive work days. Participants provided information about the availability demands at their company in the general survey. Data on duration of actual ICT use after work, detachment and work-life balance and conflict was captured daily at the last measurement point in the evening.

**Results:** Detachment mediated the detrimental effects of availability demands on perceived work-life balance and work-life conflict in the evening. The relationship was also mediated by the duration of ICT use.

**Limitations:** The present study measured all constructs using self-reports. Furthermore, the relationship between mediators and outcomes were so far only analyzed cross-sectionally.

**Research/Practical Implications:** The results show that the detrimental effect of organizational availability demands during off-time is not only mediated via detachment but also via the length of actual ICT use. It is important to gain a better understanding of the effects of availability demands to apply suitable interventions and to advance further research in this field.

**Originality/Value:** This study takes a closer look at the detrimental effects of availability demands on work-life balance and work-life conflict. It identifies two mediating variables and furthers understanding of the underlying mechanism.

### **S140: Daily Job Challenges and Off-job Activities: Positive Versus Negative Spillover**

Paraskevas Petrou<sup>1</sup>, Wido Oerlemans<sup>2</sup>, Evangelia Demerouti<sup>2</sup>

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**Objectives:** The present study proposes that individual differences determine whether daily job challenges (i.e., problem-solving job demands and job-level changes) have a positive or a negative spillover effect to daily leisure activities of employees. We hypothesized that daily problem-solving demands relate positively to daily leisure crafting after work (defined as the proactive pursuit and enactment of leisure activities targeted at goal setting, human connection, learning and personal development) for individuals high in proactive personality. In contrast, for those individuals low in proactive personality, daily problem-solving demands were hypothesized to relate positively to daily rumination after work. Similarly, daily job-level



changes were hypothesized to relate positively to daily leisure crafting for individuals high in openness to experience and positively to daily rumination for individuals low in openness to experience. Finally, daily leisure crafting was expected to relate positively to daily happiness, while daily rumination was expected to relate negatively to daily happiness.

**Methods:** The participants of the study were 80 employees working in several Dutch companies who completed a questionnaire for five consecutive working days. Every evening before bed they had to fill in the same questionnaire which started with the work-related constructs and ended with the off-work constructs. The variables of proactive personality and openness to experience were completed only once. Multilevel analyses were applied to test our expectations.

**Results:** Analyses largely confirmed our hypotheses. Daily problem-solving demands and daily job-level change positively related to daily leisure crafting when individuals were high in proactive personality and openness to experience respectively. Job level-change was positively related to rumination when openness to experience was low. Proactive personality did not moderate the link between problem-solving demands and rumination. Furthermore, daily leisure crafting related positively while daily rumination related negatively to daily happiness.

**Implications:** Our findings have implications for management and practice and suggest that when individuals are proactive and open to new experiences (which are both malleable states likely to be enhanced with interventions) they interpret job challenges in a positive manner. That may boost their performance off-work and ultimately enhance their feelings of happiness.

**Conclusion:** Individual differences determine whether daily job challenges will have positive or negative spillover effects to off-job activities. Future research needs to examine additional (perhaps situational) moderators between job characteristics and leisure crafting.

### **S141: New Ways of Working: Who do They Help, Who do They Hinder? The Moderating Role of Self-Efficacy and Perfectionism in the Relationship between NWW and Wellbeing Outcomes.**

Machteld van den Heuvel

*University of Amsterdam, Amsterdam, The Netherlands*

**Objectives:** New ways of working (NWW) refer to flexible working arrangements and are increasingly used in organizations. They typically entail increased levels of control for employees over when and where to work. So far, studies have found positive effects of NWW on employee well-being. Despite these positive findings, less favorable effects on wellbeing have also been suggested. NWW may blur work-home boundaries and may cause a sense of isolation or reduced affective commitment for some. Whether NWW leads to positive employee outcomes or not, may depend on individual characteristics. The goal of this study is to examine how individual characteristics moderate the relationship between NWW and wellbeing outcomes, namely work-home interference and burnout (exhaustion and cynicism). We focus on two moderators; first, self-efficacy as a resource-factor (sense of being able to deal with external demands) and secondly, maladaptive perfectionism as a vulnerability-factor (tendency to set unrealistic standards, to ruminate and to doubt one's actions). It was hypothesized that NWW are negatively related to work-home interference, exhaustion and cynicism. In addition, we expected that self-efficacy may boost the favorable effects of NWW, while maladaptive perfectionism may weaken this negative relationship. That is, employees who are efficacious may be better able to thrive in NWW environments. On the contrary, maladaptive perfectionists may not be able to deal with the increased autonomy of NWW, which may exacerbate the negative impact of their perfectionism on wellbeing.

**Method and results:** A sample of 212 Dutch office employees from two private sector organizations that use NWW completed online surveys at two different measurement occasions. Hypotheses were tested using moderated hierarchical linear regressions. In line with our hypotheses, we found that NWW are negatively related to burnout, but not work-home interference. Self-efficacy was negatively related to burnout, but not to work-home interference. Maladaptive perfectionism was positively related to work-home interference, exhaustion and cynicism. In addition, we found a number of interaction effects, which showed a different pattern than expected. Less resourceful employees, i.e. those low on self-efficacy and high on maladaptive perfectionism, seem to benefit more from NWW (in terms of less WHI and reduced exhaustion) than their highly resourceful colleagues.

**Discussion:** Findings indicate that NWW as well as self-efficacy are associated with less exhaustion and cynicism, while maladaptive perfectionism generally leads to detrimental effects both in terms of burnout and work-home interference. NWW therefore seems to be a promising way to empower vulnerable employees, i.e. those low on self-efficacy and high on maladaptive perfectionism. Future studies should aim to further understand NWW, its different components and for whom these initiatives work well and less well. Other personality variables as well as behavioral strategies may be examined as moderators influencing the effects of NWW on not only well-being, but also motivation and performance.

#### **S142: Leaving One's Work Behind: A Daily Diary Study on the Role of Family and Work Identity**

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It is generally accepted that employees need to detach from work in order to preserve their well-being, particularly when job demands are high. However, less is clear about the factors which may facilitate or hinder detachment from work. Individual differences in work or family role salience or centrality may represent such a factor. Leaving one's work behind may be especially troublesome among health care specialists who face emotionally charged interactions with patients and concerns for their health and well-being on a daily basis. In this study, we build on the stressor-detachment model to examine the stressor-strain link and the role of detachment on a daily level. We expect that when health care specialists' family role is very important and central for their self-concept, they may be more likely to detach from work. On the other hand, the negative effect of impaired detachment on well-being after work may be more pronounced when one's family identity is high. The opposite may hold true for work identity.

In order to test our assumptions, we collected data from 59 self-employed health care specialists (i.e., physical therapists, dentists, general practitioners) in Belgium. Our participants first completed our general questionnaire measuring their socio-demographic variables, family- and work identity. After this, they completed our daily diary questionnaire for 10 work days (i.e., two weeks from Monday to Friday), measuring their daily emotional demands, psychological detachment and exhaustion level.

The results of our multilevel path analyses reveal that health care specialists' daily level of emotional demands directly influences their exhaustion level as well as their possibility to detach from work in the evening. Yet, the negative effect of experiencing emotional demands at work on the ability to detach is buffered by their family identity. Moreover, being able to detach reduces their daily exhaustion level. This negative influence of not being able to detach on exhaustion is intensified by having a strong family identity. Work identity did not seem to moderate the relationships between emotional demands and detachment, and detachment and

exhaustion in our sample. Contrary to the propositions of the Stressor-Detachment Model, psychological detachment does not moderate; neither does it mediate the relationship between emotional demands at work and exhaustion at home in our sample.

Our study illustrates that the centrality of health care specialists' family role plays an important role in the daily spillover from their demanding work situation towards their exhaustion level at home. Having a strong family identity allows doctors to more easily detach from work despite the demanding work situation that they experience. Nevertheless, on days when they are not able to detach, having a strong family identity will result in even higher exhaustion levels.

### **S143: How Work-Self Conflict/Facilitation Influences Exhaustion and Task Performance: A Three-Wave Study on the Role of Personal Resources**

Evangelia Demerouti<sup>1</sup>, Ana Sanz-Vergel<sup>2</sup>, Paraskevas Petrou<sup>3</sup>, Machteld van den Heuvel<sup>4</sup>

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**Purpose:** Although work and family are undoubtedly important life domains, individuals are active in other life roles which are also important to them (like pursuing personal interests). Work-self-conflict represents the degree to which work characteristics are incompatible with personal interests, whereas work-self-facilitation represents the degree to which individual's engagement in the work domain contributes to enhanced functioning during time spent on personal interests. Building on identity theory and the resource perspective on work-home interface, we examined whether there is an indirect effect of work-self conflict/facilitation on exhaustion and task performance over time through personal resources (i.e. self-efficacy and optimism).

**Methods:** The sample was composed of 368 Dutch police officers who completed a questionnaire three times with approximately one year between each measurement point.

**Results:** Results of structural equation modeling confirmed that work-self-conflict was related to lower levels of self-efficacy, whereas work-self-facilitation was related to improved optimism over time. In turn, self-efficacy was related to higher task performance, whereas optimism was related to diminished levels of exhaustion over time. Further analysis supported the negative, indirect effect of work-self facilitation on exhaustion through optimism over time, and only a few reversed causal effects emerged.

**Discussion:** The study contributes to the literature on inter-role management by showing the role of personal resources within the process of work-self conflict or facilitation over time. Moreover, the study highlights the role of the personal interests (the self or me-time) in positive and negative spirals influencing the health and functioning of individuals at work.

### **Symposium: Work Engagement: More than just Engaging with Work**

Chair: Prudence M. Millier<sup>1</sup>

Discussant: Roxane L. Gervais<sup>2</sup>

<sup>1</sup>*University of the Sunshine Coast, Queensland, Australia*, <sup>2</sup>*Independent Practitioner, UK*

Work engagement is an important positive outcome in the work environment, although the literature should also consider the negative effects from being 'too' engaged at the workplace. The symposium will explore work engagement in two samples drawn from homogenous occupations and one sample containing diverse occupations.

First, Millear and Chong explored the role of intrinsically rewarding work for Australian women working in the early childhood sector to understand the paradox of poorer objective work conditions and passionate and committed long-term employees. The study found that intrinsically rewarding aspects led to greater work engagement, buffering the negative effects of job demands and highlighting the benefits of pleasant workplace amenities and the satisfaction gained from the individual's relationships. Second, Gervais and Millear examined work engagement in a sample working across diverse occupations. Rather than the specific focus of the first paper, this study showed that across occupations, work engagement was strengthened by a more supportive work climate, more control of work tasks and surprisingly, more demands. The impact of increased demands in enhancing work engagement may indicate the development of an active job, as opposed to those passive jobs that result when too many resources and too few challenges exist. Third, Millear and Rowbottom explored how psychological capital buffered challenges in the workplace amongst nursing staff working in the Australian aged care sector, for work engagement, job satisfaction, burnout, and turnover intentions. Interestingly, optimism about work conditions was the most important psychological capital that contributed to positive workplace outcomes for nurses; along with sharing the values of the organisation, which were reflected in nurses' qualitative comments.

Finally, the three studies initially used hierarchical multiple regressions to explore the impact of work engagement, as a predictor, over and above the resources and demands. All blocks of variables explained significant variance. Interestingly, work engagement was a highly significant predictor for positive workplace outcomes, indicating that it was an additional resource for employees. Mediation analyses of the indirect paths involving work engagement used the PROCESS macros for SPSS followed. It confirmed the importance of work engagement as an indirect effect in boosting job satisfaction and professional efficacy, whilst lessening emotional exhaustion and cynicism. In summary, understanding the antecedents of work engagement identifies factors that can be used by employees, and highlights the benefits that the stronger sense of zest and enthusiasm for work has to buttress and increase other positive workplace outcomes for the employee.

#### **S144: Early Childhood Staff and their Work Engagement**

Prudence Millear, Simone Chong

*University of the Sunshine Coast, Queensland, Australia*

Working in early childhood education and care is characterised by lower pay and conditions than similar staff in primary and secondary schools. Turnover can be particularly high for long day care centres (LDCs), where retention is taken as a marker of a high quality centre. Despite poorer wages, staff who remain report that supporting child development and fostering relationships are highly rewarding. The role of these rewards are explored over and above other workplace conditions, such as demands and amenities of the external environment, and the individual's coping strategies and perceptions of friendly relationships at work (as a measure of fulfilling the need for relatedness). It was expected that intrinsically motivated employees would cope better with job demands and would also benefit from more pleasant amenities (e.g., more shade, space to play), report greater social support and friendly relationships with colleagues, and have greater work engagement.

Australian women volunteers (N = 214) from LDCs (n = 184), kindergartens (n = 20), and other services completed an online survey about the work environment, job demands, rewards, social support, coping strategies and need for relatedness. Hierarchical multiple regressions explored the predictors of work engagement. Block 1 included work role, health and friendly workplace relationships; Block 2: hours, job demands and amenities; Block 3: job rewards and social support; and Block 4: coping strategies.

The female participants worked from 8 to 80 hours/week ( $M = 41.0$ ,  $SD = 12.8$ ); as room assistants ( $n = 53$ ), group leaders ( $n = 34$ ), kindergarten teachers/directors ( $n = 34$ ) or LDC directors ( $n = 64$ ). Most were in full-time ( $n = 143$ ), rather than part-time ( $n = 65$ ) or casual ( $n = 15$ ) positions. More senior work roles (e.g., director, teacher) had greater levels of work engagement than room assistants, although job demands did not vary between these positions. All blocks contributed significantly to work engagement. Good health remained significant, whilst the positive effect of work role and friendly relationships were mediated by the successive blocks; as were amenities and job demands. At the final step, job rewards that were intrinsically motivating, good health, and coping strategies that focus on planning and seeking support to manage work stress, predicted greater work engagement. Further mediation analyses found that the effect of friendly relationships on greater work engagement was mediated by how rewarding the women perceived their work. Women with more senior positions reported greater work engagement, but this was mediated by better workplace amenities and by seeing work as more rewarding.

Work engagement was strongly predicted by good health and the women's perceptions that their work was intrinsically rewarding and important for children to achieve their potential. This was regardless of their position within the early childhood industry, workplace amenities, job demands, or how supported or friendly they found their colleagues. Finding rewards within one's work buffered the effects of job demands; highlighting the need for employers to take effective steps to foster the staffs' intrinsic desire to help children's educational development.

#### **S145: The Enhancement of Work Engagement through Job, Personal and Work Characteristics**

Roxane Gervais<sup>1</sup>, Prudence Millea<sup>2</sup>

<sup>1</sup>*Independent Practitioner, Goole, UK*, <sup>2</sup>*University of the Sunshine Coast, Queensland, Australia*

The benefits of work engagement to workers have been noted, such as with job performance and client satisfaction (e.g., Bakker, Schaufeli, Leiter, & Taris, 2008). However, as engagement research has developed, it has been suggested that the topic should be considered within a broader context (George, 2011) to allow a more diverse understanding of the drivers of such behaviour, as well as its impact outside of the work sphere. The present research explored those more traditional work characteristics used in work engagement research thus far, but included more varied predictors: work climate, perception of income, positive and negative affect, hours of work; to assess their impact on workers' engagement levels.

The design was cross-sectional and the data were collected using an online survey. The participants completed measures of work engagement, work climate, hours worked, skill discretion, decision authority, co-worker social support, job autonomy, positive and negative affect, perception of income, psychological job demands, and work-life conflict, as well as demographic information. The data were subjected to psychometric testing to assess the robustness of the variables; followed by correlation and regression analyses to allow an understanding of the relationships and interdependence of the factors in the present study.

The participants ( $N = 117$ ) were between 17 and 64 years old ( $M = 41.83$ ;  $SD = 13.95$ ) and consisted of more women than men ( $M = 1.76$ ;  $SD = 0.43$ ). The psychometric properties of the variables were strong, e.g., work engagement:  $\alpha = .89$ , with the relationships in the expected direction, such as skill discretion leading to higher work engagement ( $r = .65$ ,  $p < .001$ ); while a better work climate resulted in higher job autonomy ( $r = .48$ ,  $p < .001$ ). The hierarchical multiple regression consisted of five steps, with age and gender controlled on the first step. The final step of the model accounted for 81% of the variance ( $\text{Adj } R^2 = .81$ ,  $\Delta R^2 = .19$ ,  $F[13, 92] = 36.33$ ,  $p < .001$ ). Work climate ( $\beta = .35$ ,  $p < .001$ ), skill discretion ( $\beta = .61$ ,  $p < .001$ ), lower

decision authority ( $\beta = -.44$ ,  $p < .01$ ), job autonomy ( $\beta = .52$ ,  $p < .001$ ), positive affect ( $\beta = .33$ ,  $p < .001$ ), job demands ( $\beta = .11$ ,  $p < .053$ ), and lower work-life conflict ( $\beta = .68$ ,  $p < .001$ ), were all predictors of engagement.

The benefits of job and personal resources in supporting work engagement have been highlighted (Bakker et al., 2008) and the present research supports that assertion. Moreover, the findings showed that other broader characteristics, such as work climate and positive affect, contributed to higher engagement levels. More extrinsic characteristics, such as perception of income and hours of work that might be expected to contribute to engagement, did not; while more work demands, did. The findings showed that engagement is not contingent only on job and personal resources, and a better understanding of the most appropriate climate in which engagement flourishes should be explored. These issues will be discussed.

### **S146: Work Engagement in Nursing Staff in Aged Care Facilities**

Prudence Millear, Ashleigh Rowbottom

*University of the Sunshine Coast, Queensland, Australia*

Registered nurses and nursing assistants working in the aged care sector have different working conditions than nurses in hospitals, with higher staff-patient ratios and a focus on chronic, rather than acute, diseases. Considerable research has determined the antecedents of work engagement in the general nursing community and the current study extends prior research by including nursing staff in residential aged care facilities and nursing homes in Australia.

Volunteers (N = 198, all female) completed an online survey about their personal resources (measured as psychological capital: efficacy, hope, resilience, and optimism), length of time nursing, workplace conditions (measured by Areas of Work Life scale: high workload, control of tasks, sense of community, fairness, and shared values) and the outcome scales of work engagement, job satisfaction, burnout, and turnover intentions. Finally, they noted the most troubling and rewarding aspects of their work.

Participants were aged from 17 to 73 years (M = 43.0, SD = 13.1) and were registered nurses and assistants, working predominantly in private aged care facilities (n = 154), rather than governmental health services. The length of time nursing ranged from <1 to 5 years (n = 67) to more than 30 years (n = 30), although age, length of time nursing, or types of schedule (full-time, permanent part-time, or casual) did not impact on the outcomes. The correlations between the variables were in the expected directions, with more psychological capital and positive working conditions associated with greater work engagement, less emotional exhaustion and cynicism, less impact on professional efficacy, and less intention to change employment. Hierarchical multiple regressions entered psychological capital (Block 1: efficacy, hope, resilience, and optimism) then the areas of work life (Block 2: high workload, control of tasks, sense of community, fairness, shared values) for each outcome. Optimism was the most common predictor, particularly for work engagement, emotional exhaustion, and cynicism; although its effect on job satisfaction was mediated by working conditions. Sharing values with the organisation was also important for work engagement and for job satisfaction; along with fairness and the psychological capital measures of hope and resilience, for the latter. Feeling unrewarded increased emotional exhaustion, whilst absence of community and fairness and high workloads increased cynicism. Interestingly, understaffing was listed as the most troubling part of their work, indicating that higher workloads become problematic as a result of too few staff being available to meet the needs of patients. In contrast, the benefits of community are reinforced through reports of the most rewarding part of the job, that of the positive interactions with residents and fellow staff.



In combination, greater work engagement and job satisfaction and less burnout were more likely amongst staff with more psychological resources; particularly where the women had optimism about their working conditions, with contributions from each of the different areas of one's working life. Higher workloads, experienced as understaffing, and community, experienced as helping the elderly residents in their care, were the markers of most troubling and rewarding aspects in this work, respectively.

### **S147: Work Engagement: Is it Something More or Too Much of a Good Thing?**

Prudence Milllear<sup>1</sup>, Roxane Gervais<sup>2</sup>

<sup>1</sup>*University of the Sunshine Coast, Queensland, Australia,* <sup>2</sup>*Independent Practitioner, Goole, UK*

Work engagement is viewed as an outcome of the employees' experiences in the workplace, as it increases with more resources and reduces with excessive demands. In this paper, we examine the role of work engagement as an indicator variable, compared against personal and work resources and work demands, in three diverse populations. It was hypothesised that work engagement could be an additional resource that increases, for example, job satisfaction and prevents, for example, burnout. Moreover, it was also possible to determine if work engagement could be considered as 'too much'. If so, then the presence of resources and demands would account for the benefits of work engagement, leaving only the negative aspects of excessive engagement (evident by negative suppression in the regression models). Centre directors, teachers and room assistants (N = 214) working in early childhood; registered nurses and nursing assistants (N = 198) working in aged care; and a sample of employees across diverse occupations (N = 117) independently completed online surveys consisting of work and personal characteristics. The analyses consisted of two stages: first, hierarchical multiple regressions (HMRs) added work engagement as the final block; and second, the PROCESS macros for SPSS using mediation to explore the indirect pathways that included the effects of work engagement. The outcomes were job satisfaction, emotional exhaustion, cynicism and professional efficacy. The HMRs for each outcome used the same format, as Block 1: personal resources (e.g., dispositional optimism), Block 2: workplace resources (e.g., skill discretion), Block 3: workplace demands (e.g., workload) and Block 4: work engagement.

Each block in the HMRs added significant variance to the outcomes, and this pattern was observed across all samples. Work engagement was a positive and significant predictor of greater job satisfaction, higher professional efficacy, less emotional exhaustion, lower cynicism, and did not show evidence of negative suppression. Across the samples, the general pattern was that personal resources were initial strong predictors of the outcomes, then the successive additions of workplace resources and demands partially mediated their effect. Work engagement predicted strongly and positively the outcomes over and above the first three blocks of variables. Whilst the effects of job demands were not mediated by work engagement, resources lead to work engagement, which in turn predicted all of the outcomes. The enthusiasm that the participants felt about their work provided a balance to cope with the work demands. When enthusiasm was lessened, demands would increase, leading to lower levels of job satisfaction and increased burnout.

Mediation analyses in each sample explored the indirect effects of work engagement as contributors to the outcomes. In a similar manner to the regressions, the indirect pathways through work engagement were significant, over and above the direct effects of personal and workplace resources. Regardless of place or type of employment, work engagement provided the participants with an additional and substantial benefit. In these samples, engagement provided a buffer for burnout and added to job satisfaction, highlighting the importance of enthusiasm and zest to sustaining individuals at work.

## **Symposium: The work-Family Interface as a Complex Construct: Basic Processes and Influencing Factors**

Chair: Petra L. Klumb

Discussant: Laurenz Meier

*University of Fribourg, Fribourg, Switzerland*

The wish to harmonize work and family is strong in the young men and women living in industrialized societies of the 21st century and this issue deserves the attention of researchers and practitioners alike because both health and productivity are at stake. Within-person approaches to the interface between work and family yielded novel insights into the mechanisms relating work and family. But the phenomenon turned out to be rather complex and we need to know more about how the processes change for specific subgroups, working conditions, or methodological approaches.

Our symposium assembles four studies that used daily diaries of experiences and behaviors at work and at home to determine the relationship between the two domains and to describe which kind of stable characteristics describe subgroups with specific processes. Using three diaries on five consecutive days, Lynn Germey found actor and partner effects in her sample of 30 couples. The relation between workload and work-family conflict was mediated by job strain for women and by exhaustion for men. In addition, there was an effect of husband's exhaustion on women's level of work-family conflict. Regina Jensen's diary study with 75 fathers suggests that the processes that relate work and family may depend on learning experiences made earlier in a person's career. Bettina Kubicek's diary study with 203 couples shows that working conditions shape the work-family processes but not all of the effects are in the expected directions. Finally, Sebastian Siegler's study makes a methodological contribution to the symposium by comparing the results of two analytic approaches to the work-family interface. The aim of this collection of studies is to contribute novel evidence regarding processes linking work and family and to advance theory through the specification of influencing factors.

### **S148: Gender Differences in the Work-Family Spillover and Crossover within Dual-Earner Couples**

Lynn Germeys, Sara De Gieter

*Vrije Universiteit Brussel, Brussel, Belgium*

**Purpose.** Past research distinguished two processes via which states of well-being (e.g., strain) can be transferred. On one hand they identified spillover processes, i.e., the intra-individual transfer of well-being states from one life domain to another. Past research found negative effects of workload on employees' work and home domain (Bowling et al., 2015). In addition, scholars found reciprocal spillover effects between exhaustion (Hall et al., 2010), job stress (Casper et al., 2007), and work-family conflict. In this study, we examine whether job stress and exhaustion mediate the relationship between workload and work-family conflict on a daily basis. On the other hand, scholars identified crossover processes, i.e., inter-individual transfer of well-being states from one individual to a significant other. There is cross-sectional evidence for a crossover of exhaustion levels within dyads of employees (Hakanen et al., 2013) and dual-earner couples (Westman et al., 2001), and crossover of stress within one-earner couples (Cowlishaw et al., 2011). We examined whether there are direct crossover effects of partners' levels of job stress and exhaustion on their spouses' feelings of work-family conflict on a daily basis.

**Method.** Data collection took place in Belgium in 2015. Both partners of 30 dual-earner couples (N = 60) completed three surveys a day over the course of 5 consecutive workdays. The experience sampling surveys questioned workload (at 14h), job stress and exhaustion (at 16h30) and work-family conflict (at 22h). All constructs were measured with 3 items from existing validated scales.



Results. We analyzed our data using multilevel mediation modeling for dyadic diary data (Laurenceau & Bolger, 2012). Experiencing workload during the workday leads to feelings of job stress and exhaustion at the end of the workday, these feelings in turn hamper the functioning at home, resulting in experiencing work-family conflict in the evening. However, the relationship between workload and work-family conflict is mediated by exhaustion for men, whereas it is mediated by job stress for women. In addition we found support for a unidirectional crossover effect, namely women's level of work-family conflict is influenced by their husbands' level of exhaustion.

Conclusions. This research contributes to a better understanding of the dyadic diary spillover-crossover model. This is particularly important given the consequences of the work-family interface for an individual's physical and psychological health (Hammer & Zimmerman, 2011). In addition, these findings open up new avenues for research examining the underlying mechanisms causing these gender differences in the spillover and crossover processes. Our findings can raise employees' awareness of the potential consequences for themselves as well as for their spouses of having to manage too much work.

#### **S149: How Do Different Kinds of Social Demands at Work Affect Our Well-being? Results from a Diary Study**

Regina Jensen<sup>1</sup>, Sebastian Siegler<sup>1,2</sup>, Petra L. Klumb<sup>1</sup>

<sup>1</sup>University of Fribourg, Fribourg, Switzerland, <sup>2</sup>Humboldt-University, Berlin, Germany

Social interactions are part of most professions and play an important role in our daily working life. As social stressors at work (e.g. interpersonal conflicts) are often mentioned by workers, researchers so far focused mainly on negative kinds of social interaction and found them to be related to impaired well-being. On the other hand, social demands at work offer opportunities to generate new resources which may result in improved well-being. So the aim of the our study was to investigate differential effects of different kinds of social demands at work on well-being by taking into account potential moderating factors such as social skills.

We carried out a diary study among working fathers. During eight days, the participants answered four questionnaires per day regarding e.g. social demands and subjective well-being. We complemented the diary questionnaires with a cross-sectional questionnaire to assess personal as well as stable work characteristics which may moderate the relationship between social demands and well-being. Our first analyses suggest differential effects of specific social demands on well-being. Therefore, this study specifies existing knowledge about the influence of work characteristics on employee's well-being.

#### **S150: When Does Flexibility Aggravate or Counteract Work-Family Conflict? Looking at Spillover and Crossover Effects via Psychological Detachment**

Bettina Kubicek<sup>1</sup>, Matea Paškvan<sup>1</sup>, Sara Tement<sup>2</sup>, Katarina Katja Mihelic<sup>3</sup>

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Flexible work arrangements (i.e., flexibility in terms of when and where work is completed) are often advocated as a key strategy to counteract work-family conflict. Recent meta-analytical findings (Allen et al., 2013) however suggest that flexibility, and spatial flexibility in particular, may not have the intended effect of reducing work-family conflict due to increased exposure to work-family role blurring. Therefore we examined psychological detachment (i.e., a form of creating psychological boundaries between the work and family domains; Allen et al., 2014) as a mediator between flexible work arrangements and work-family conflict. Specifically, we

hypothesized that the use of temporal and spatial flexibility is associated with poorer psychological detachment which in turn contributes to work-family conflict. Because the use of flexible work arrangements may also have consequences for the significant other, we used the couple as the unit of analysis (Greenhaus & Powell, 2012). Partners are part of the same family system; hence they affect each other in a reciprocal manner. Such effects of one partner on the other are referred to as crossover effects (Schooreel & Verbruggen, 2015). Specifically, we assessed whether the use of temporal and spatial flexibility affects the partner's psychological detachment and work-family conflict.

Data were gathered among 203 dual-earner couples living in Austria, Germany, and Switzerland. Analyses were conducted using the actor-partner interdependence mediation model (Ledermann et al., 2011). Findings indicate that spatial flexibility had a negative direct association with strain-based work-family conflict among men. However, we also found a significant indirect effect that pointed in the other direction: Men's use of spatial flexibility was negatively related to their psychological detachment, which in turn was negatively related to strain-based work-family conflict. In other words, spatial flexibility indirectly aggravated work-family conflict via poor psychological detachment. No such direct or indirect effects were found for women. With regard to time-based work-family conflict we found a similar pattern of results for men and women. Spatial flexibility was indirectly positively related to time-based work-family conflict via the mediating effect of poor psychological detachment.

For temporal flexibility, we found negative direct and positive indirect effects on strain-based work-family conflict among men. Moreover we found a positive indirect (crossover) effect of men's use of temporal flexibility on women's psychological detachment and women's strain-based work-family conflict. With regard to time-based work-family conflict only an indirect (crossover) effect emerged: women's use of temporal flexibility contributed to poorer psychological detachment and consequently higher levels of time-based work-family conflict among their partners.

In sum, these results contribute to the literature on work-family conflict and flexible work arrangements in at least three ways. First, they answer a recent call for assessing the underlying mechanisms that link job characteristics to work-family conflict (Duong et al., 2015) by examining psychological detachment as a mediator. Second, they acknowledge the role of others in the social system in boundary management by using a dyadic approach. Third, the results underscore the importance of differentiating not only between different forms of work-family conflict but also various forms of flexibility (Allen et al., 2013).

### **S151: Micro-longitudinal Associations between High-Arousal Negative Affect and Detachment from Work of Employed Parents: A Comparison of Two Modelling Approaches**

Sebastian Siegler<sup>1</sup>, Manuel Voelkle<sup>2</sup>, Laurenz Meier<sup>1</sup>, Petra Klumb<sup>1</sup>

<sup>1</sup>University of Fribourg, Fribourg, Switzerland, <sup>2</sup>Humboldt University Berlin, Berlin, Germany

Research on the linkage between stress at work and recovery is an important topic in organisational and occupational health psychology. In particular, detachment from work-related issues has been identified to be a key cognitive process for recovery. A number of studies with an intraindividual design (e.g., diary studies) have demonstrated reliable links between daily changes in stressors at work, detachment, and affective strain (for a review, see Sonnentag & Fritz, 2015). Regarding the modelling approaches for analysing those intraindividual processes, multilevel structural equation modelling (mlsem) has become well established.

This approach, however, does not capture the dynamic nature of the relationship posited by prominent theories on the linkage between stress and recovery. As dynamic models for the

analysis of change, continuous time structural equation models (ctsem) overcome this limitation. However, ctsem has not been used for the analysis of the relationship between stress and recovery before and it remains unclear to what extent the two modelling options yield comparable results. For this reason we set out to compare the two approaches using data from an ambulatory study with dual-earner parents (N = 56) who rated their momentary high-arousal negative affect and detachment from work-related issues several times in the evening, for a period of seven consecutive workdays. Estimates resulting from mlsem and ctsem indicated different associations between detachment from work and high-arousal negative affect with respect to effect size and gender. We discuss the pros and cons of analysing data with each of the two approaches and formulate suggestions for future applications.

## **Symposium: Revisiting the Psychological Experience and Consequences of Unemployment**

Chair: Hans De Witte

*KU Leuven, Leuven, Belgium*

Unemployment did not disappear in Europe during the last decades, and even increased in many European countries due to the economic crisis that resurged since the 'banking crisis'. Specific countries such as Greece and Spain even show exceptionally high levels of unemployment (respectively 28% and 26% in 2013). As a consequence, it seems important that scientists and especially Occupational Health Psychologists focus on this phenomenon and its consequences. Research on the psychological consequences of unemployment started in the 1930s of the previous century with (a.o.) the famous 'Marienthal study' of Jahoda and her colleagues. During the 1970s the interest in unemployment and its consequences resurged again, leading to several longitudinal studies, thorough overview articles and meta-analyses since. The scientific interest in unemployment appears less pronounced lately, which seems to contrast with the increase of unemployment during the last decade. In this symposium, we suggest to take up the issue of unemployment again. We aim to update our knowledge and explore 'where we are' and where research needs to proceed in the future. Specific interest will be devoted to longitudinal studies, studies from Southern countries (including South Africa), and an evaluation of guidance for the unemployed.

### **S157: Let's Volunteer in Times of Unemployment: A Two-year Follow-up Study Investigating Health, Health Behaviour and Well-being Outcomes**

Yannick Griep<sup>1</sup>, Martin Hyde<sup>2</sup>, Tim Vantilborgh<sup>1</sup>, Jemima Bidee<sup>1</sup>, Hans De Witte<sup>3</sup>,<sup>4</sup>, Roland Pepermans<sup>1</sup>

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**Aims & Hypotheses:** As unemployment has serious negative health, health behaviour and well-being consequences, we deem it crucial to investigate potential mitigating factors for one's health, health behaviour and well-being in times of unemployment. By juxtaposing a psychosocial (substituting latent functions of employment) and materialistic (not substituting manifest functions of employment) pathway, we investigate whether volunteering in times of unemployment is a potential mitigating factor on the relationship between the well-documented negative health, health behaviour and well-being consequences of unemployment.

**Methodology:** We test our hypotheses using data from the 2010 and 2012 wave of a Swedish nationally representative longitudinal cohort survey (N = 717) comparing groups of individuals who were 1) unemployed and volunteering during both SLOSH waves (N = 58), 2) unemployed and not volunteering during both SLOSH waves (N = 194), 3) employed and volunteering

during both SLOSH waves (N = 139), and 4) employed and not volunteering during both SLOSH waves (N = 326). Conducting a path analysis in Mplus, we examined the interaction effect between labour market status (i.e., employed or unemployed) and voluntary work (i.e., volunteering or not) when predicting changes in health, health behaviours and psychological well-being.

**Results:** Our results indicate that volunteering in times of unemployment significantly decreased the amount of cigarettes smoked, the likelihood to consume alcohol and the likelihood to be diagnosed with hypertension, thereby supporting a psychosocial pathway perspective. However, for all other indicators no such buffering interaction effect was obtained, thereby supporting a materialistic pathway perspective. Nevertheless for some indicators volunteering was found to be beneficial for both the unemployed and employed.

**Conclusion:** Integrating the materialistic perspective and the psychosocial perspective might provide a better explanation for the onset of ill-health and ill-being among employed and unemployed individuals. In terms of practical implications, voluntary organizations are recommended to highlight the various appeal of volunteering as both organizations (e.g., contributing to society) and volunteers (e.g., less substance abuse) benefit from volunteering in times of unemployment.

### **S158: Why do Individuals Suffer during Unemployment? The Causal Role of Deprived Psychological Needs**

Andrea Zechmann, Karsten Paul

*Friedrich-Alexander University of Erlangen-Nürnberg, Nürnberg, Germany*

**Study Aims:** According to Jahoda's (1981) deprivation model, a main cause of the diminished mental health of unemployed persons is a lack of the so-called latent functions of employment (time structure, social contact, status, activity, collective purpose) which represent psychological needs. The present study aims at testing the causal assumptions of the model longitudinally. We also propose an extension of the model by the needs for autonomy and competence. These functions directly pertain to the occupational domain of people's lives and have been shown to be important predictors of mental health.

**Methods:** We tested our assumptions with a four-wave longitudinal study consisting of N = 1022 unemployed persons (49.00 % males) at T1. At T2 (n = 747), T3 (n = 669) and T4 (n = 398, so far), 17.80 %, 31.24 % and 36.93 %, of the participants were reemployed. All measures had at least satisfactory reliabilities, ranging from  $\alpha = 0.70$  to  $\alpha = 0.93$  from T1 to T4.

**Results:** Repeated measures ANOVAs showed a significant positive effect of reemployment on access to Jahoda's latent functions and on mental health at the subsequent measurement points. The same result was found for the additional need dimension of competence. Unexpectedly, autonomy decreased slightly, but significantly from T1 to T2 and from T2 to T3 when formerly unemployed persons had found new jobs. Multiple regressions (which controlled for the stability of the predictors) showed that better access to all latent and the manifest function predicted mental health at each subsequent wave as well as over the course of approximately 13 months (i.e., from T1 to T4). The needs for competence and collective purpose emerged as the most important predictors of mental health.

**Conclusions:** First, preliminary results support the assumptions of the latent deprivation model in a large sample with a longitudinal design. Our study represents an improvement in methodological quality compared to all existing studies concerned with the model and allows for sounder causal inferences. Second, the findings endorse the extension of the original deprivation model by the need for competence. In order to stabilize or even improve the mental

health of unemployed persons, interventions should facilitate the satisfaction of the latent functions. As data collection of T4, T5 and T6 is still ongoing, results on the complete sample will be reported at the conference.

### **S159: How Evidence based is the Guidance of Unemployed to Work? A Brief Review of the Literature**

Roland Blonk

*TNO, Leiden, The Netherlands*

Job loss and unemployment has severe consequences for well-being and health. Therefore in almost all western countries many efforts were and are made to assist the unemployed to work. However, evaluation studies thus far didn't reveal pronounced effects of these efforts. In The Netherlands this resulted in major cuts of more than four billion euros annually on the budget for assisting those with a distance to the labour market. A closer look at these evaluation studies reveals that the majority of these studies are primarily focused on policy evaluation. Assistance is differentiated in large categories of trajectories relevant for policy makers but of limited relevance for social workers. Further, these studies use registered data from municipalities, not in all cases the most reliable data, and predominantly without a long term perspective.

To gain more insight and to develop new knowledge in the current project we applied a different approach, a problem oriented approach rather than a policy relevant categorization. We used Wanberg et al. (2002) model of reemployment success to search the literature for evidence based approaches. Wanberg's model distinguishes seven factors. Five of these are individual focused: job seeker human capital, social capital, reemployment constraints, economic need to work and job search behavior. Two factors are contextual: employer discrimination and labour market demand. Firstly we looked at the overall effect of active labour market policies (ALMP) as a overall indicator of the effect. Secondly we looked for different interventions categorized in one of Wanberg's categories.

Three recent meta-analyses on ALMP (Kluve, 2010; Card et al. 2010; 2015) revealed a small positive but significant and heterogeneous effect. Concerning the seven factors the most conclusive evidence (one meta-analysis) was found for interventions aimed at enhancing job search behavior. Further evidence was found for enhancing human capital and reducing job seekers constraints. A limited number of interventions were found for intervening on labour market demand and inconclusive evidence was found for interventions aiming at the economic need. No interventions were found for enhancing social capital and reducing discrimination. The conclusion drawn is that, for example compared with mental health services, the evidence based fundament of guidance of the unemployed is very limited. Scientific action is needed.

### **S160: Cross Validation of a Psychosocial Typology in the South African Context**

Leoni van der Vaart<sup>2,1</sup>, Anja van den Broeck<sup>1,2</sup>, Hans de Witte<sup>1,2</sup>, Ian Rothmann<sup>2,1</sup>

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**Orientation:** In South Africa between 25 and 35 percent of the working-age population is unemployed and remains one of the biggest challenges the country is facing. Due to the economic, psychological, and social costs associated with unemployment dealing with the challenge remains a priority for government and other relevant stakeholders.

**Motivation:** Policies and programmes are needed to stimulate economic growth but the success of these policies are dependent on a responsive labour market. In order to facilitate the creation of responsive individuals, interventions are needed. However, these interventions should be

evidence-based. Subsequently we need to investigate who is unemployed to enable the design of interventions tailored for the context in which we operate. South Africa differs significantly on a variety of indicators (i.e. economic, political, and social) which may influence the unemployed individuals' attitude toward employment, their job search behaviour and their affective experiences of unemployment.

**Aims:** The aim of this study is to investigate the types of unemployed that can be found in South Africa based on a psychosocial typology which was developed in Europe. The typology postulate that five types of unemployed – the optimist, desperate, discouraged, adaptive and withdrawn – can be identified based the unemployed's attitudes, behaviour and experiences, and the cross-cultural validity of this will be investigated in South Africa.

**Method:** A biographical questionnaire and the Experience of Unemployment Questionnaire (EUQ) were administered with a convenience sample of 381 unemployed individuals residing in the Potchefstroom area in the North-West Province in South Africa. Data analysis will be performed by means of latent class analysis to categorise people into different latent classes depending on their responses to the variables. Model fit will be evaluated based on a number of goodness-of-fit indices.

**Implications:** The results will be utilised to design interventions prioritising those most at risk.

### **S161 Cultural Conventions and Unemployment in South Africa**

Melinda Du Toit<sup>1,2</sup>, Hans De Witte<sup>2,1</sup>, Sebastiaan Rothmann<sup>1,2</sup>, Anja Van den Broeck<sup>2</sup>

<sup>1</sup>North-West University, Vanderbijlpark, South Africa, <sup>2</sup>KU Leuven, Leuven, Belgium

**Motivation:** This research wants to explain the experience of unemployment in South Africa from various different vantage points of black South Africans living in two communities within the Gauteng Province. The focus is on listening to the "black voice" conveying their experience of unemployment within their specific communities. An individual's cognition, behaviour and affect might crystallise into practices and mentalities which are often unique to a particular community of people. This unique set of "habits" can be conceptualised as conventions. Conventions refer to agreements in a society about how things should be done. Conventions include overt actions, beliefs, and ways for dealing with problems. Conventions pre-suppose some kind of intuitive knowing of what and how to be as the basis of a societal agreement. A gap exists in current knowledge in that no information is available regarding cultural conventions that might explain why individuals are unemployed, what they do to deal with the causes of their unemployment and how they experience unemployment.

**Aims:** The aim of this study is to reach a clear understanding of a) the cultural conventions at play and b) the constraints and affordances at play within the South African unemployment landscape according to various role-players within the unemployment landscape.

**Method:** The methodology of this study goes beyond the constraints of analytical, positivistic science (episteme) and beyond the technical knowledge or know-how (techne) of research and involves a caring, value added manner of doing research which is done with respect and in collaboration with the participants. By implication, this means context-dependent, in-depth focus with an aim towards attaining social description, action and reshaping (Tracy, 2013). The qualitative approach to research opens up the possibility of engaging in a process of discovery through which an understanding of the participants' reality is attained or enhanced.

In-depth interviews were conducted with 50 participants (including government officials, academics, community leaders/activists, community service providers, employers, entre-



preneurs, recently employed people, and unemployed people). The main objective was to construct stories and narratives from the participants in an informal, method conversational manner. Field notes during all the processes of research participants were used to capture observations.

Implications: A deeper understanding will be reached regarding cultural conventions which affect experiences of unemployment, which will be presented at the conference. This knowledge and recommendations will be used as inputs for guiding intervention programmes to assist with the unemployment situation in the two targeted communities.

### **Symposium: The “always on culture”– Implications for Recovery and Work-life Balance**

Chair: Cristina Quinone<sup>1</sup>

Discussant: Almuth McDowall<sup>2</sup>

<sup>1</sup>Open University, Milton Keynes, UK, <sup>2</sup>Birbeck University of London, London, UK

There is evidence that work-life conflict is increasing in Europe in the aftermath of the economic crisis (OECD, 2013) and the growing and continued use of ICTs (Information & Computer Technology) is thought to be a contributing factor (White & Thatcher, 2015). Psychological recovery from work is vital to replenish physical, psychological and cognitive resources. A lack of ‘down time’ can have a major impact on job performance, as well as health and satisfaction with work and personal life (Geurts & Sonnentag, 2006). It is therefore vital to help individuals and organisations manage their ICTs more healthily and sustainably, with benefits for all stakeholders. This symposium examines the wide-ranging implications of ICT use on recovery, boundary management and work-life balance. It comprises four thought-provoking papers that draw on a range of theoretical and methodological approaches (e.g. diary studies, surveys and in-depth interviews). The studies explore personal experiences of ICT use, psychological recovery and work-life balance and the role played by organisational context and individual differences. The session will conclude with a brief interactive panel discussion which will consider the implications of the findings to help organisations and individuals engage with ICTs in a more healthy and sustainable manner and identify priorities for future research.

The aims of the symposium are to:

- a) Raise awareness of the ‘always on culture’ and the implications for work-life balance
- b) Consider relevant theory and novel frameworks to guide current and future research
- c) Consider the implications for practice to help individuals and organisations manage their ICT use more effectively and sustainably
- d) Outline the gaps in our understanding and highlight priorities for future research

### **S162: Is there a Price for Easy-Access Recovery after Work? Daily Impact of Emotional Demands and Resources on Recovering through Excessive Technology Use**

Cristina Quinones

*Open University, Milton Keynes, UK*

According to the Job Demands-Resources model, sustained emotional demands and low job resources over time lead to emotional exhaustion. From the emotional labour literature, we know that emotional-charged interactions at work (e.g. dealing with irate customers, being kind to unreasonable customers) demand effort. Hence those who have high emotional demands and lack emotional and physical detachment outside work are particularly at risk of developing emotional exhaustion (deJonge et al., 2011). Given the availability and the variety of leisure activities online, workers may go online as the easier option to unwind after work. The extent to which these activities can actually help restore emotional resources has not yet been demonstrated. In contrast, there have been studies suggesting that some people might become

overly attached to technology to the point of experiencing conflict with work and close relationships. For these people, using technology as a recovery mechanism can be particularly detrimental. This study examines the extent to which daily emotional demands in customer service roles increase individuals' coping through excessive technology use.

Participants were selected to participate in the study if they reported high engagement with technology and dealt with customers on a regular basis. A total of 166 people were selected and completed the baseline survey. Of these participants, 83 responded to the diary over four consecutive days three times a day. At lunchtime participants were asked to report about their mood, and their use of technology since they got up, as well as emotional demands about the job and emotional resources (i.e. peer and supervisor support). At the end of the working day they reported the amount of effort exerted in dealing with customer demands that day and their need for recovery. Before going to bed respondents were asked about use of technology and other recovery activities that they engaged in through the evening. Items from validated instruments were used at each time point. Hypotheses were tested with multilevel analysis. It was found that on days where both emotional demands and job resources were high, participants reported lower effort at work and engaged less significantly with technology after work. Instead, they reported higher levels of emotional and/or physical detachment. In contrast, when demands were high and resources were low, employees reported higher effort and they were more likely to recover through technology use only. Finally, when employees engaged in emotional and physical recovery at night, they reported better mood and higher energy levels the morning after than if they had only engaged on virtual recovery activities.

These findings suggest that there seems to be a price to pay for easy access to recovery activities (i.e. online recovery). Organisations can ameliorate this problem by providing adequate resources as this seems to be associated with individuals' engagement in healthier recovery strategies. This is important for both individuals and organisations as effective recovery mechanisms improve staff health and enhance productivity.

### **S163: Invisible and Implicit: The Impact of Employer-Provided Mobile Technology on Professionals' Boundary Management Strategies**

Almuth McDowall, Buki Ogunde

*Birbeck University of London, London, UK*

The proliferation of mobile technology makes it an increasingly common tool for businesses seeking to raise workforce efficiency, to allow faster and more direct communication, increased flexibility but also increased availability for work. This study builds on existing work-life balance literature with particular focus on border (Clark, 2000) and boundary management theory. More specifically, it aims to facilitate our understanding of the bearing employer provided mobile devices have on employees' working habits, and how these in turn affect the degree of separation or integration between work and non-work domains or borders. This study took place in the context of the UK health service, an organisation which has seen fundamental changes and cut backs over the last two decades. The overall research question was how employees use mobile technology to manage work-life boundaries and work-life balance.

Thirty-three employees (70% female, 30% male; across a number of work roles including administration, medical and nursing) participated in a seven day qualitative diary study, paired with six semi-structured follow-up interviews. The written diaries and transcribed interviews were combined and analysed thematically in line with Braun and Clarke's guidelines (2006) involving data familiarization, generation of initial codes, identification of themes, their review, definition and naming and finally reporting. The overarching themes are related to work load, perceptual connectivity, family resilience and ameliorated working. Findings show that mobile devices spurred the blurring of boundaries and very few respondents deployed active boundary



management strategies, but rather reported permeable boundaries which aided the extension of their working day. Usage of mobile devices increased conflict between work and family life; curiously participants nevertheless predominantly viewed the devices as enabling work-life balance. The theme of perceptual connectivity appears to provide a new insight, as it refers to participants' perceptions of expectations to use technology outside working hours, rather than any absolute or even implicitly communicated organisational norms. The paper will conclude with suggestions to follow up with relevant research to better understand these individual beliefs, as well as practical suggestions to better manage technology use, given the potential long term well being implications.

#### **S164: Enabled Intensification? ICT Use, Work-Life Balance and Wellbeing in UK Academics**

Gail Kinman

*University of Bedfordshire, Luton, UK*

The job demands experienced by academics have increased and diversified over the last ten years or so, resulting in longer working hours and increased work-life conflict for many. The high level of flexibility experienced by many academics, however, can potentially offset the negative impact of work intensification on the personal domain. Academic work is characterised by a high level of involvement and a tendency to integrate work and home roles; indeed there is evidence that a high proportion of core academic work is done at home or other locations. The potential for information communication technology (ICT) to facilitate integration between work and personal life is recognised. Used effectively, therefore, ICT may help academics utilise their flexibility to enhance their work-life balance and their productivity. Nonetheless, the increasing evidence that a lack of respite from ICTs and email overload can lead to emotional exhaustion and cognitive failures raises concerns for their recovery, work-life balance and job performance.

This presentation draws on mixed-methods research to examine academics' use of ICT for work purposes and the implications for their recovery, work-life balance, wellbeing and job performance. The role of job demands, job involvement, preference for work-life integration/separation and schedule flexibility was also examined. An online questionnaire was utilised and the issues were explored in greater depth using interviews, where other relevant topics, such as email management behaviours and choice and control over email use, were also explored. Attitudes towards e-mail management initiatives that were available, or could be introduced by universities, were also considered.

The ability to access email at times of their choosing was generally viewed positively by academics. The potential for ICTs to facilitate flexible working and enhance work-life balance was also recognised. Nonetheless, a high level of email overload was generally reported which was strongly related to reduced recovery, work-life conflict, emotional exhaustion and engagement. Perceptions of email demand also had negative implications for job performance, especially when sustained periods of concentration and reflection were required. Nonetheless, few academics appeared to use email management strategies and many perceived a lack of control over their email behaviours. Increased work intensification, the requirement for prompt responses to student queries, the unbounded nature of academic work and its inherent flexibility, together with high job involvement, encouraged use of ICT during evenings, weekends and holiday periods. Although being 'always on' has the potential to increase productivity and job satisfaction in the short term, the longer-term impact on recovery, work-life balance and wellbeing raises some concerns. The findings have potential to aid the development of interventions to help universities develop email management initiatives that are congruent with the nature of academic work, and can help employees manage their ICT use more effectively to protect work-life balance, wellbeing and personal functioning.

## **S165: I Just Can't Get Work Out of my Head': A Critical Retrospective of Research on Mobile Telephony and Work-life Balance**

Diannah Lowry

*Open University, Milton Keynes, UK*

The role of technology and flexibility in work and employment has sparked much debate, with optimistic accounts on the one hand and with more negative views on the other. Technology however is of course not homogenous in its uses or in its impacts. While work technologies such as the internet and email have been critically studied, the way(s) in which the mobile phone may shape work and workers' experiences has largely been avoided until recently. There has been a tendency to ignore the impact of mobile technologies on the 'unspectacular' or pedestrian aspects of every day life, including everyday work-life.

It has been suggested that the mobile phone may lead to an acceleration in the metabolism of the organization, which potentially serves to bind the efforts of workers even in non-work hours. In varying degrees, workers may become 'tethered' to their organisation. This could be exacerbated by the move to 24/7 modes of operation, whereby workers in global industries are expected to be 'at work' around the clock. Mobile phones have thus been construed as a type of digital panopticon, where discipline based on time is replaced by continuous accessibility (Kopomaa, 2000). It is not just employees of global firms who are prone to this 'tethering' effect. Zero hours workers in the UK (known as casual workers in other countries) for example, depending on the industry in which they are employed, can be expected to be on call around the clock (Lowry, 2001; Lowry, Simon and Kimberly, 2002). Many such workers are now significantly more accessible through mobile phones technology, and risk being penalised by not responding to work-related calls. The 'tethering' effect of the mobile phone may be exacerbated for this group of already disadvantaged workers.

This paper is the result of a wider study which included a broad exploration of issues associated with the use of the mobile phone for work purposes. The key focus of this current paper is on how the mobile phone may shape the boundaries between the public (work) and private (home) domains, and on how these boundaries are negotiated or navigated. This study involved in depth interviews with 20 workers from different occupational and organisational settings. Participants' narratives suggested both positive and negative impacts of the mobile phone on the work-life balance, seeing the work mobile phone as a 'double-edged' sword (Lowry and Moskos, 2005). Positive and negative impacts of the mobile phone were dependant on occupation, economic and market forces, contextual factors associated with bureaucratic structures, and the reported degree of instrumental agency in mobile phone usage. While the workplace mobile phone is found to define and bind identity through the continuity of spatial networks, it is also found to evoke identity anxiety by invasion into the private domain.

### **Symposium: Relating context, process and outcome evaluation of organizational health interventions**

Chair: Georg F. Bauer<sup>1</sup>

Discussant: Lenneke Vaandrager<sup>2</sup>

<sup>1</sup>*University of Zurich, Zurich, Switzerland,* <sup>2</sup>*Wageningen University, United States*

Background and aim: Outcome research on interventions targeting job demands, job resources, health and well-being shows heterogeneous results. Thus, conducting process and context evaluation along with an outcome evaluation is increasingly called for. However, in most cases only process or context factors are reported. Thus, the symposium aims to explore how the intervention process relates to context and how this bi-directional relationship can help explain differential outcomes.

**Contributions:** The symposium consists of four papers. The first paper provides a conceptual introduction. The next three papers sequentially show outcome, process and context evaluation of the same project dealing with the impact of a lean management intervention on psychosocial working conditions and well-being in a healthcare setting. Finally, the discussant critically reflects these papers and discusses the general nature of relationships between intervention process and intervention context.

**Paper 1.** Conceptual relationships between context, process and outcome evaluation (Georg Bauer): Based on the Context-Process-Outcome-Evaluation Model (CPO Model, Fridrich et al. 2015), this paper will show how these key dimensions of context, process and outcome are related to each other during each phase of interventions.

**Paper 2.** Effects of lean management on psychosocial working conditions and employee well-being in a healthcare setting (Rebecca Brauchli): This paper shows differential longitudinal effectiveness of the intervention depending on a high vs. low retrospective assessment of the intervention.

**Paper 3.** Does intervention participants' process appraisal predict change in outcomes of entire teams? (Désirée Füllemann): this paper identifies key team-level process indicators predicting changes in work and health-related outcomes

**Paper 4.** Same but different: The influence of team context on intervention effects (Gregor Jenny): This paper shows that high and low impact wards differed considerably in their perception of the context

**Discussion and conclusions:** Based on these four papers, the relationships between context, process and outcome evaluation will be discussed with the audience and conclusions for future organizational health intervention research will be drawn.

### **S166: Conceptual Relationships between Context, Process and Outcome Evaluation of Organizational Health Interventions**

Georg Bauer, Gregor Jenny

*University of Zurich, Zurich, Switzerland*

**Background:** Organizational health interventions targeting job demands, job resources, health and well-being typically combine different intervention elements following an underlying intervention architecture. The resulting complex change process will produce heterogeneous results varying across different organisations. In order to understand such differential outcomes, outcome evaluation needs to be combined with process and context evaluation. The present paper aims to clarify the concepts of context, process and outcomes – and their relationships.

**Methods:** The literature on evaluation models in occupational health psychology and public health has been reviewed. On this basis, the Context-Process-Outcome-Evaluation Model (CPO Model, Fridrich et al. 2015) has been developed which provides clear definitions of context, process and outcome as the core evaluation categories. Further, it shows how these categories are related to each other. The model has been empirically tested in two large-scale evaluation studies.

**Results:** The model defines context as the overarching frame within which an organizational health intervention is implemented, change occurs and outcomes emerge. Process is differentiated into two sub-categories. The implementation process is defined as the time-limited, actual enactment of all steps and elements of the original intervention plan. The change process is defined as all intended and unintended, observable and non-observable

mechanisms of alteration in the intervention context triggered by the implementation – on the levels of the individual, group, leader and organization. These alterations lead to outcomes, defined as all results of the change process observable and measurable in the intervention context. According to the phase of the change process, alterations of proximate outcomes (e.g. improved knowledge or attitude), intermediate outcome (e.g. improved communication or leadership behavior) and long-term outcomes (e.g. health or productivity) can be distinguished.

Conclusions: In the context of this symposium, the model is used to show how context-, process-, and outcome-evaluation results can be systematically presented and related to each other. For this purpose, the model offers a parsimonious framework with a well-defined set of categories and relationships between them.

### **S167: Effects of Lean Management on Psychosocial Working Conditions and Employee Well-being in a Healthcare Setting**

Rebecca Brauchli, Gregor Jenny, Désirée Füllemann, Georg Bauer

*University of Zurich, EBPI, Public & Organizational Health, Zurich, Switzerland*

Background: Healthcare organizations are under strong economic pressure. An increasing number of healthcare organizations adopt lean management, which has become a very popular management approach to increase efficiency and quality. Existing studies on lean implementation have mainly investigated its effects on organizational performance. Regarding effects on psychosocial working conditions and employees' well-being, empirical evidence is scarce and contradictory.

Study: This study aims at evaluating the impact of a lean management intervention on psychosocial working conditions and well-being in a healthcare setting. The intervention was implemented in 29 nursing wards of a large university hospital in Switzerland from 2013 till 2015. A four-day workshop was implemented in each ward by the hospital's internal project managers. Workshop participants consisted of representatives of each nursing profession including the head of ward.

Methods: An online survey was applied three times at 6-month intervals in each ward. The intervention had a wait list control group design, that is, the 29 nursing ward were assigned to intervention ( $n = 16$ ) or control group ( $n = 13$ ). First, we compared the intervention and control group concerning job demands and resources as well as stress and work engagement. Second, we divided the intervention group wards into two subgroups: The first group ( $n = 5$  wards; in the following  $RIA_{high}$ ) was characterized by a highly positive assessment of the impact of the intervention whereas the second ( $n = 5$  wards; in the following  $RIA_{low}$ ) assessed the impact of the intervention comparably low.

Results: Overall, the comparisons between intervention and control group yield no or only few significant results: in the intervention group the situation improved a little bit (however, there was only a significant decrease in stress between  $t_1$  and  $t_2$ ) whereas in the control group it remained more or less the same. The comparison between the wards  $RIA_{high}$  and  $RIA_{low}$  showed very a different picture: Whereas the wards with a positive retrospective impact assessment had throughout positive results over the three times of measurement (increasing job resources and work engagement / decreasing job demands and stress) the situation of the reference group  $RIA_{low}$  worsened during the same time.

Conclusions: The implementation of lean management in this hospital can be considered as successful in terms of psychosocial working conditions of the employees as well as employee well-being – however, only for those who had a positive attitude towards the project. One key

finding of this study is that it is highly important to consider the attitude and motivation of the recipients of the intervention during the whole change process and – if ever possible – to positively influence their attitude and motivation, preferably via internal projects managers and ward supervisors. Besides, another important finding is that rather classical intervention-/control-group comparisons may be inadequate when evaluating such complex intervention processes in complex systems where an indefinite number of factors cannot be controlled.

### **S168: Does Intervention Participants' Process Appraisal Predict Change in Outcomes of Entire Teams?**

Désirée Füllemann, Annemarie Fridrich, Gregor Jenny, Rebecca Brauchli, Georg Bauer  
*University of Zurich, Zürich, Switzerland*

**Background:** In organizational health interventions it is a common approach to have representatives of teams – instead of whole teams – who participate e.g. in workshops and develop action plans aiming to improve working conditions and health. Still, the goal of organizational health interventions is to positively affect all team members' work situation and well-being through e.g. developed action plans, independent of whether they directly participated in workshops or not. Further, to enlighten the question for whom and under what circumstances organizational health interventions work, a mere measure of exposure is not sufficient, but participants' process appraisal of the intervention is the preferred measure. Taken together, this study examines how the process appraisal of active participants relates to change in work conditions and well-being of entire teams.

**Study:** The study is based on a lean implementation project aiming simultaneously at improving working conditions (including lean work processes) and health. We assume that a positive process appraisal in terms of 1) workshop quality and 2) outcome expectancies of workshop participants relates to team-level changes in working conditions and well-being. Further, we assume that the participation rate on team-level 3) amplifies the relationships of process appraisal with well-being.

**Methods:** We used data from a lean management intervention aiming simultaneously at improving working conditions (including lean processes) and health in a large university hospital in Switzerland. Four-day workshops with team representatives were implemented in 29 nursing wards from 2013 to 2015 using an intervention/ wait-list control group design. At the end of the workshops, participants filled in process appraisal questionnaires covering workshop quality and outcome expectancies. Three questionnaires with six-month intervals were distributed to all employees, covering work characteristics (including lean processes) and well-being.

**Results:** Preliminary results of multilevel analyses indicate that a high workshop quality appraised by participants is related to enhanced well-being and reduced stress of the entire team over time, but not to leaner work processes. Participants' outcome expectancies did not affect team members' well-being or stress but played a role when it comes to perceptions of leaner work processes: high outcome expectancies of workshop participants were related to perceived improvements of lean work processes due to the intervention by all team members. Participation rate on team-level showed no moderating effect on the relationships of process appraisal with well-being.

**Conclusions:** Is it possible to trigger a collective dynamic and observe spillover effects from intervention-involved to all team members? And what process factors explain positive change in outcomes of entire teams? The preliminary results suggest that not all process appraisal factors influence all investigated team outcomes. Results imply that participants' workshop

appraisal spills over on the entire team: in the case of a positively appraised quality of workshops, teams report enhanced well-being and less stress at work. In the case of leaner work processes due to the project, high outcome expectancies of participants seem to be crucial. These differential relationships will be further explored and discussed.

### **S169: Same but Different: The Influence of Team Context on Intervention Effects**

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**Background:** The contextual factors influencing an intervention are usually split into facilitating and hindering variables, both of which are not under control of the intervention researcher. Especially in organizational (health) interventions taking place in the field, scientists have to “take what they can get”, that is, a company willing to spend time and mobilise staff for a pilot project involving employee surveys, workshops, and focus groups. Often the companies and teams taking part in such interventions already display elevated motivation, interest and knowledge in regard to the intervention’s subject. Still, effectiveness research on interventions targeting job demands, resources, health and well-being do not show consistent positive results (if any at all). This inconsistency is attributed to procedural and contextual factors. Research on process factors shows for example that appraisal of the intervention has an influence on its results. Many studies also report contextual factors, which are commonly based on qualitative data retrieved from informal exchange, observations, log books, interviews, or focus groups. This study aims at systematically exploring contextual factors related to the effectiveness of a lean management intervention in nursing wards.

**Methods:** This study used data from a lean management intervention (including a survey and workshop on improving psychosocial job demands and resources) at a large university hospital in Switzerland. It was implemented in 29 nursing wards from 2013 till 2015. All nursing wards received the same intervention. Nursing wards were split according to their answers on a scale measuring the perceived impact of the intervention in the final of three employee surveys. Three wards each were selected with the highest and lowest mean values, respectively. Focus groups were conducted with open questions on the process, context, and effects of the intervention.

**Results:** Despite having received the same intervention and working in the same larger organizational context, the high and low impact wards differed considerably in their statements about and tone towards the intervention. Attitudes and perception of the context could be mirrored, for example, where some teams saw opportunities in an either way constantly changing environment, others saw primarily more load put upon them at the wrong point of time.

**Conclusions:** Based on quantitative data, teams were selected for a pronounced, qualitative between-group comparison. The identified contextual factors can serve as variables to be assessed at the beginning of an intervention and if necessary addressed before starting with surveys and workshops. However, it must be acknowledged that often there is little willingness to spend more time on preparing the intervention grounds as soon as key decision makers assent to the project. On the other hand, we don’t know enough about the development of such projects during time and at what point interventions tilt and fail or gain decisive momentum.



## **Symposium: “First, Do No Harm”: Examining antecedents and consequences of different sources of aggression in the workplace**

Chair: Roberta Fida<sup>1</sup>

Discussant: Chiara Guglielmetti<sup>2</sup>

<sup>1</sup>Norwich Business School, University of East Anglia, Norwich, UK, <sup>2</sup>Università degli Studi di Milano, Milan, Italy

Aggression in the workplace is a widespread phenomenon and it represents one of the most significant criticalities in organisations worldwide. In Europe, according to the International Labour Organization (2009) 6% of employees experienced some form of violence at work, and according to the Agency for Safety and Health (2015) 59% of workers experienced misbehaviour. Aggression in the workplace can take different forms, from mild behaviours as incivility and verbal aggression to more severe acts of abuse, harassment and bullying including extreme psychological and physical violence. Workplace aggression can have multiple sources, internally such as colleagues and superiors or externally such as clients, customers or patients (Shat, Frone, & Kelloway, 2006) and can have different antecedents. Although it is clear that the effects produced and the way to cope with them can vary not only in relation to the specific form of the aggression but also depending on the specific source, only few studies have distinguished between the different sources. In addition less is known about the impact of workplace aggression and outcomes other than workers' health and wellbeing, especially when considering that these are not the only consequences. Therefore this symposium focuses on different forms and sources of aggression in terms of incivility, bullying, counterproductive work behaviour and third party aggression. It will examine both the antecedents and the possible consequences of workplace aggression as well as the factors that may reduce the negative impact of it.

In the first paper of this symposium the authors examine some antecedents of workplace bullying. Specifically they discuss how passive aggression disposition among the targets and the exposure to positive and negative forms of leadership may predict workplace bullying. The second paper focuses on the effect of workplace incivility and bullying on nurse's perception of patient safety risk and adverse event. In the third presentation the authors examine how third party aggression may exacerbate aggression in the workplace. Specifically the paper investigates the pathway from patients' aggression to nurses' counterproductive work behaviour. Finally the fourth paper, by using a mixed method design, explores the conflicting interaction between nurses and patients and the emotional regulation strategies adopted by nurses that modulate the negative emotional response."

### **S170: Exploring Pathways between Patient Aggression and Nurse Counterproductive Work Behaviour**

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Work-related violence is a serious safety and health hazard. Moreover, employees in certain sectors are at greater risk than others. In particular, according to the European Agency for Safety and Health at Work Report (EU-OSHA, 2010), the highest incidence of workplace violence is found in the health and social work sectors. According to the international literature findings consistently indicate that patient and visitor aggression against healthcare staff are the most prevalent work-related violence in the healthcare system (Camerino et al., 2008; Eurofound, 2013; Roche et al., 2010) with approximately 22-90% of healthcare workers suffer verbal abuse, 12-64% physical threats, and 2-32% physical violence (Pompeii et al., 2013).

Overall the healthcare literature appears to have placed much more emphasis on the incidence and the antecedents of patients' aggression. Less is known about its impact and outcomes other than workers' health and wellbeing, especially when considering that these are not the only consequences. Indeed, extensive literature underlines that negative emotions elicited by stressful experiences (for example anger and frustration) may lead to a counterproductive response (Spector & Fox, 2005). Specifically according to the extended version of the stressor emotion model of counterproductive work behaviour (CWB, Fida et al., 2015) the more frequently the employees experience stressors in their work environment, the more they respond with negative emotions and in turn the more they activate moral disengagement mechanisms, that leads to behaviour not in line with norms and protocols. Clearly this counterproductive response in the health care context can have serious consequences on the quality of the care and even on patients' health. The primary aim of the study is to examine whether aggression from patients and their relatives may result in employee CWB towards colleagues and in relation to clinical practice.

Results of a structural equation model on a sample of 416 nurses (57% females, mean age 42 years SD=9.5) confirmed that third party aggression (physical and verbal aggression and threats thereof) is associated with CWB and negative emotions that are in turn associated with CWB and moral disengagement that is also associated with CWB. The overall results suggested the experience of aggression at work can exacerbate CWB through the activation of negative emotions and moral disengagement.

### **S171: Impact of Workplace Mistreatment on Patient Safety Risk and Nurse-Assessed Patient Outcomes**

Heather K. Laschinger, Roberta Fida

*Arthur Labatt Family School of Nursing, Faculty of Health Sciences, University of Western Ontario, London, Canada*

**Purpose:** Workplace mistreatment is known to have detrimental effects on job performance and in nursing may threaten patient care quality. The aim of this study was to investigate the impact of workplace mistreatment (bullying and incivility) on Canadian nurses' perceptions of patient safety risk and, ultimately, nurse-assessed quality and prevalence of adverse events.

**Design/Methodology:** A total of 336 nurses from acute care settings across Ontario responded to a questionnaire that was mailed to their home address in early 2013, with a response rate of 52%.

**Results:** Bullying and incivility from nurses, physicians, and supervisors have significant direct and indirect effects on nurse-assessed adverse events ( $R^2 = 0.03-0.06$ ) and perceptions of patient care quality ( $R^2 = 0.04-0.07$ ), primarily through perceptions of increased patient safety risk.

**Limitations:** The cross-sectional design precludes attribution of causal effects and the use of self-report measures raises concerns about common method variance.

**Research/Practical Implications:** Bullying and workplace incivility have unfavourable effects on nurse-assessed patient quality through their effect on perceptions of patient safety risk. Managers play a key role in creating environments that support professional nursing practice that promote high-quality patient care and establishing a positive patient safety culture is an important facet of healthcare managers' mandate to ensure positive patient outcomes.



### **S172: Workplace Bullying Predicted by Trait Anger, and Constructive and Destructive Forms of Leadership. A 3-Wave Longitudinal Study**

Stig Berge Matthiesen<sup>1</sup>, Andrea Bobbio<sup>2</sup>

<sup>1</sup>BI, Norwegian Business School, Bergen, Norway, <sup>2</sup>University of Padova, Padova, Italy

Workplace bullying describes someone who is exposed to negative acts repeatedly over a certain time period, and who has difficulty defending him or herself against these acts. The target of workplace bullying feels humiliated or oppressed. The meaningfulness of work tasks may deteriorate as an outcome of being subjected to abrasive behaviour such as bullying. Violent episodes may also occur. Many studies have demonstrated the negative health impact of workplace bullying, e.g. linked to psychosomatic complaints and post-traumatic stress disorder (Matthiesen & Einarsen, 2004), or suicidal thoughts (Nielsen et al., 2015). Due to the power issue the negative impact of workplace bullying may be extra strong when the perpetrator holds a leader position, in particular if he or she possesses the role as immediate superior. Previously, studies have found a link between destructive leadership and workplace bullying (e.g. Hoel et al., 2010). Yet, very few studies have investigated the link between various leadership styles and workplace bullying within a longitudinal design context. Moreover, studies have demonstrated that the personality issue may play a part in terms of workplace bullying. In line with this, trait anger is found to influence deviant behaviour (Eisenberger et al., 2004). Little research has been conducted thus far, however, to investigate trait anger as part of the vulnerability profile among targets of workplace bullying. One may argue that trait anger may indicate a kind of passive aggressive disposition among the victims.

Data in this presentation is captured in Italy (longitudinal 3 wave study, with 3 months interval between the time lags). 463 Italian employees participated in the study, with mean age 44,5 years (age range 19-62 years of age). 56% of the respondents were women, and 27% of the sample had university degree or equivalent. About 2 in 3 respondents, 70%, was recruited from private sector. In the present study, trait anger (time point 1), as well as positive and destructive leadership styles (time point t1, t2 and t3) were explored, to investigate whether these antecedent factors predict workplace bullying at the final time point. Multivariate statistics revealed that destructive leadership quite strongly predicts future workplace bullying. Contrary to what we expected, constructive leadership does not correspond negatively with such misbehaviour (non-significant effects). Trait anger was found to have a more mixed impact on workplace bullying. Methodological weaknesses are discussed, along with some suggestions for future studies.

### **S173: Angry Nurses: Managing the Emotions in the Interaction with Aggressive Patients**

Chiara Guglielmetti, Silvia Gilardi

*Università degli Studi di Milano, Milan, Italy*

**Introduction:** In health care organizations aggressive behaviours and violence are internationally recognised as a growing phenomenon. Health care personnel, mostly nurses, appear to be particularly exposed to episodes of verbal aggression by the patients and their carers. Researches highlighted that the perception of being exposed to a high level of user/patient aggression is associated to higher levels of burnout and emotional discomfort, marked by anger and fear. If the emotional workload is well documented, very few studies explore the processes through which health operators assess an episode as aggressive and develop strategies of emotional regulation in order to manage conflicting relationships with the users.

**Aims and Method:** This research presents the stories of critical incidents narrated by 27 nurses of different areas and contexts, gathered in the qualitative/explanatory phase of a mixed method design research. Using as frame Gross' emotion regulation theory and Grandey's emotional labour model, this research explores: a) the conflicting interactions with users which

lead to emotional activation; b) the emotional regulation strategies implemented by the operators to modulate such activation; c) the social and organisational dimensions perceived as resources to handle relationships interpreted as aggressive.

Results and conclusions: The interviews show that the concept of aggressiveness is blurred and can range from rude and uncivilised behaviour to physical violence. The operator's anger is confirmed to be the most complex emotion to modulate. Among the strategies of emotional regulation are highlighted a sort of "normalization of evil" and a tendency to attribute less importance both to the impact of personal and professional experiences and to a collective thought oriented to design organisational actions for the prevention and management of the phenomenon.

### **Symposium: Occupational health psychology and sustainability - furthering the research agenda**

Chair: Aditya Jain

The theme of the APA/NIOSH 2015 Work, Stress, and Health Conference gave special attention to the concept of "sustainability," and the integral role of occupational safety, health and wellbeing in sustainable growth. Improving working conditions and promoting occupational safety, health and wellbeing (OSHW) are clearly relevant to the CSR activities and sustainability of the firm (Jain et al., 2011), as can also be seen in the increased reporting of these issues in annual company CSR/sustainability reports (Vuontisjärvi, 2006) and their inclusion in CSR/sustainability instruments and standards (Jain et al., 2014; Montero et al., 2009; Ripa & Herrero, 2012). Looking after the workforce and developing its capacity (mentally, socially, etc.) has strategic importance for organizations and society alike. Secure and fair employment and decent working conditions provide financial security, social status, personal development, social relations and self-esteem, and protection from physical and psychosocial hazards – each important for health (Benach et al., 2007; Marmot & Wilkinson, 2006). An active healthy workforce is therefore a key determinant to sustainable economic and human development.

While recent 'integrative' initiatives to promote good practice in OSHW, such as the NIOSH Total Worker Health Approach and the WHO Global Framework for Healthy Workplaces, highlight the importance of business responsibility and sustainability, there are however a number of gaps in research and practice which have led to limited diffusion of approaches which link sustainability, business responsibility and worker's safety health and wellbeing, both at the organizational and policy level. Researchers and practitioners must therefore play a key role in addressing these gaps so as to allow OSH research and practice to further develop and promote employee health, safety and wellbeing through a sustainability approach. To identify critical gaps and develop an agenda for research an interactive panel session was organized during the 11th International Conference on Work, Stress, and Health: Sustainable Work, Sustainable Health, Sustainable Organizations in Atlanta, May 2015.

In a series of presentations, panelists and participants deliberated on four key questions:

- What are the critical gaps in research and practice as it applies to sustainability, occupational safety and health?
- What is the role of the occupational health psychology field in the field of sustainability research and what research is needed for the advancement of workplace sustainability as a concept?
- What do you see as the key components/measures of societal, organizational and workforce sustainability as it relates to Work, Stress, and Health?
- What do you see as essential elements of sustainable approaches to achieving Total Worker Health?

Panellists and participants discussed the steps needed to fill the gaps in current practice and address the challenges highlighted by the presenters. Ideas for future research included:

**Clarification of concepts:** One of the main challenges identified in the area was the lack of working definitions of concepts, there is therefore a need raise more awareness and promote a better understanding of terminology relating to sustainability which mostly originates from other disciplines.

**Multidisciplinary applied research:** There is a need for multi-disciplinary research, directed at not only the individual level but also at the organizational and governmental levels. This research should be translated beyond the worker safety & health and occupational health psychology literature, into a wider knowledge base, including that of sustainability, business, investment analysis, leadership and management, and ethics. Economic case for sustainability: More research is needed relating to economic aspects of sustainable work, health, and organizations. There needs to be more evidence of the link between investments in worker safety, health, and wellbeing and how this benefits the organization as a whole.

**Sustainability in SMEs:** There is a need for more sustainability initiatives by small and medium enterprises, which make up the majority of companies and face special challenges in worker safety and health protections. Understanding incentives for potential alignment of sustainability at all levels (worker, organization, etc.) is therefore essential, and could be achieved through the development of appropriate policies and interventions.

**Issues relating to precarious work:** With increases in contracting, multiple-employer relationships, and global relationships, it is more crucial than ever to have accountability for contractors --and subcontractors— for sustainability of the contingent and precarious workforce. There is a need to create a more level playing field between companies and between companies and workers.

**Monitoring and evaluation:** More can be done to integrate the measurement, evaluation, and reporting of safety, health, and financial outcomes. There is a need to develop and use metrics that include leading indicators including subjective and objective indicators, which can be used to describe outcome trends and distributions.

This symposium builds on the discussion of the Atlanta conference and aims to further the research agenda on occupational health psychology and sustainability."

#### **S174: Corporate Sustainability and Workplace Equality: Fighting Discrimination, Enhancing Human Capabilities.**

Luis Torres, Aditya Jain, Stavroula Leka  
*University of Nottingham, Nottingham, UK*

In January 2015 Oxfam released a report undelaying that inequality is rapidly increasing around the world where half of economic resources are owned by one percent of the population. The global tendency is that poor people are every day poorer meanwhile the richest are incrementing their wealth. This is of particular concern in developing regions like Latin America where inequality has increased as fast as their economic growth affecting the historical discriminated groups such as indigenous people, women, black people, and migrants. It is in this context where responsible business practices or CSR can be a useful governmental and organisational tool to reduce inequalities (Utting, 2007). However, the last fifteen years of the development agenda represented by the Millennium Development Goals (MDGs) have primarily been based on government-led initiatives, with business involvement limited to an ad hoc basis (Mancini & Maestre, 2015). With the post-2015 agenda the awareness regarding the potential contribution of the private sector in addressing some of the global challenges has significantly evolved (UN, 2015).

The question is then not whether businesses have to engage in equality issues within and beyond their workplaces but rather how they can make the most of their contribution. In this respect and from a business perspective, the equality discussion has taken a strong business case and voluntary approach related to diversity management (Williams & O'Reilly, 1998). This perspective has been helpful to engage companies in equality issues, but also very narrow in scope and impact. On the other hand, a broader proposition linking CSR and the capabilities approach for human development has emerged (Blowfield, 2005; Gagnon & Cornelius, 2006). This perspective proposes that any business effort should be evaluated according to the extent to which they increase the freedom people have to be and to do what they value. This presentation takes this latter proposition to develop an analytical model of CSR and workplace equality. It understand CSR from a multilevel perspective including governmental policy action to promote business responsibility, levels of corporate responsiveness and employee response. By doing so, it attempts to identify how CSR can enhance human capabilities at the workplace and how employees support/block initiatives increasing equality.

### **S175: Influence of Corporate Social Responsibility initiatives on the health, safety and well-being of workers**

Daniel Ripa, Juan Herrero

*University of Oviedo, Oviedo, Spain*

This doctoral research analyses the influence of Corporate Social Responsibility (CSR) initiatives undertaken by enterprises on the health, safety and well-being of workers. To do so, a multi-methods approach is used, including qualitative and quantitative analyses using multiple data sources. Firstly, it examines the coverage of working conditions in the main 28 CSR standards, identified through an extensive review, and which areas receive more emphasis. A thematic analysis is conducted in order to build an evaluation framework covering working conditions, which was compared to relevant ILO standards. This evaluation framework is then applied to the CSR reports from 100 FT500 Index companies to analyse the extent to which companies manage and improve working conditions (including health, safety and well-being) as part of their CSR activities. Secondly, this research explores the role of CSR drivers behind the implementation of Occupational Health and Safety (OHS) and psychosocial risk management policies in European companies using the ESENER survey. Thirdly, using the ESS this research analyses the impact of the most prominent psychosocial risks at work on workers' health, taking into account individual and country-level characteristics.

Results from the first study allowed to develop an evaluation framework that included six themes: employment conditions; training, performance and communication; industrial relations; diversity and discrimination; occupational health and safety, and human rights, as well further second and third order themes. In the second study, it was found that client requirements as well as an interest in improving corporate reputation were powerful drivers for implementing OHS and psychosocial risk management systems. Therefore CSR may be thought also as a tool to promote a better performance in OHS at workplaces. In the third study, results show that most psychosocial hazards studied had an impact on workers' health, although there was an influence of the level of human development in the relation between two hazards studied (i.e., perception that health is at risk and work-life balance) and subjective health.

On the basis of the findings from the reviews and studies carried out as part of this research, it can be concluded that CSR standards and initiatives at workplace seem to follow basic health and safety and labour rights. Due to the lack of international and national legislation and inherent challenges in the development and implementation of a solely legal/regulatory approach, this research highlights that CSR initiatives can be used as a way to improve working conditions and reduce psychosocial hazards by complementing existing regulatory

approaches. OHS hazards still provoke negative impacts on workers' health and can be addressed by comprehensive health and safety policies. These policies can be accelerated by client requirements and a will to improve corporate image, as well as by implementation of comprehensive CSR standards considering psychosocial hazards. This research concludes by proposing issues included in CSR standards that can be used to implement workplace interventions.

### **S176: Occupational Safety, Health and Wellbeing as an essential driver of 'material' sustainability**

Aditya Jain

*University of Nottingham, Nottingham, UK*

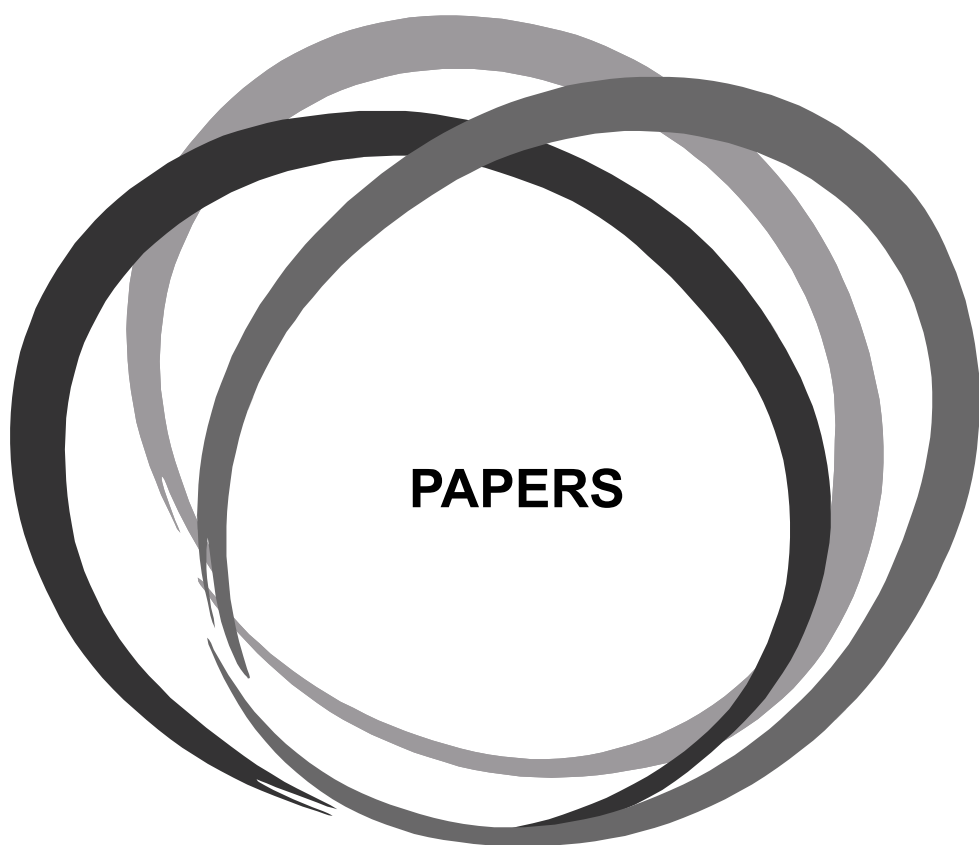
It is clear that enterprise responsibility and sustainable development involves social concerns, which include aspects of the psychosocial work environment and occupational safety, health and wellbeing (OSHW). Also, as challenges in enforcing legislative requirements increase, due to issues of resources, creative compliance (Gold & Duncan, 1993), lobbying for changes (Bain, 1997), blatant disregard for legislation, and less success in developing countries (Joubert, 2002), responsible business practices are expected to continue to play a more important role for achieving higher standards of practice. Engaging in responsible business practices which incorporate the psychosocial work environment has been reported to potentially lead to increased sustainability for the business, a better public image and improved employer reputation (Jain, Leka, & Zwetsloot, 2011).

Major initiatives in the area of sustainable development, such as the newly agreed sustainable development goals (SDGs) which set the global sustainability agenda until 2030, for the first time explicitly refer to full and productive employment and decent work for all as a means of achieving sustained, inclusive and sustainable economic growth, and include goals relating to protecting labour rights and promoting safe and secure working environments of all workers, including migrant workers, particularly women migrants, and those in precarious employment.

This is an opportune time to increase attention and efforts towards issues relating to workers' safety, health, and wellbeing. While recent 'integrative' initiatives to promote good practice in OSHW highlight the importance of business responsibility and sustainability, there are however a number of gaps in research and practice which have led to limited diffusion of approaches which link sustainability and OSH, both at the organizational and policy level. This can partly be attributed to the all-inclusive approach to sustainability, which covers a wide range of pressing societal, environmental and governance issues, however, the manner in which it is currently executed has the potential to scatter focus on these critical issues in the company boardroom (CSHS, 2015).

One way to address this concern is to prioritise sustainability-related issues by identifying those that are "material" to an organisation or specific industry (CSHS, 2015). Materiality is the principle of defining the social and environmental topics that matter most to a business and its stakeholders (KPMG, 2014). While materiality of OSHW has been recognised since long (IOSH, 2003) and that there is a wealth of data demonstrating that in the long term, the most successful and competitive companies are those that have the best health and safety records, and the most healthy, satisfied and productive workers, the materiality of OSH in sustainability reporting is not well established.

The inclusion of OSHW performance metrics within integrated sustainability reports clearly holds great promise for advancing the protection of the global workforce (CSHS, 2015). It is therefore imperative that OSHW is established as an essential driver of 'material' sustainability in the era of integrated reporting. This paper discusses the key role practitioners and researchers in occupational health psychology must play in this endeavour.



## **O1: To Adhere or Not to Adhere: A Typology for Understanding Healthcare Providers' Adherence to Safety Protocols**

Anat Drach-Zahavy, Anit Somech, Larisa Boim  
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**Introduction:** Adherence to safety guidelines has been recognized as an important factor, facilitating safety behaviors. Yet, why some employees adhere to safety procedures, while others do not- remains relatively unsolved. In healthcare organizations, adherence to safety procedures is more complicated as adherence to safety procedures might be for the sake of keeping one's own safety, as well as for maintaining the patient's safety.

**Aim:** To depict the factors, which facilitate or inhibit healthcare providers' adherence with safety procedures concerning their own safety as well as their patients' safety.

**Method:** The study combines qualitative (interviews) and quantitative (structured observations, descriptive statistics) methods. Data was collected from 40 nurses that were observed on three different occasions (total of 120 observations) while providing cytotoxic treatment for patients; after the third observation, a reflective interview was conducted, where the researcher provided feedback to the nurse on her safety behavior during the observations, and asked him/her to reflect on them.

**Findings:** Quantitative findings indicated that nurses demonstrated higher adherence to safety regulations that referred to maintaining the patients' safety as compared with maintaining their own safety. Statistically significant differences were found in the nurses' safety behaviors according to nurses' demographic variables such as age, tenure, and education. High consistency was also found in nurse's behavior across the three observations, further pointing at a personal characteristic affecting nurses' tendency to adhere with safety regulations. Organizational characteristics were less evident as shaping factors; yet, the use of protection measures was also statistically significantly higher in clinics that were less loaded and at the presence of the head nurse. Qualitative analysis of the interviews supported the quantitative findings, and pointed at the significant value of the personal attitudes towards the risk of unprotected work, as a fundamental contributing factor for self-protection practice. Specifically, four types of non-adherence were identified.

**Discussion:** The study findings contributed in identifying four main types of non-adhere to safety procedures: 1. Knows, wants, and behaves safely; 2. Knows, doesn't want, therefore does not behave safely; 3. Knows, wants, but doesn't behave safely; 4. Doesn't know and therefore does not behave safely. This typology has practical implications for improving nurses' adherence to safety protocols and procedures. The 'knows wants, and behaves safely' type should be reinforced, so that he or she will maintain their safe behavior. The 'doesn't know' type should be provided with knowledge, and guidance in regard with the risks involved in working unsafely. For the 'knows but doesn't want' type, guidelines need to be simplified and barriers and obstacles need to be removed. And for the 'Knows, wants, but doesn't behave safely' type there is a great importance of implementing the use of new technology.

**Conclusions:** Organizations could benefit from developing more "tailor made" improvement processes to each of the four types identified and described above.



## O2: The Influence of Safety Experts' Cooperation on Accident Severity

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Safety experts are trained professionals whose main areas of expertise consist of analysing and assessing workplace hazards and risks. In particular, they inspect technical work equipment and develop operating instructions as well as safety briefings in order to improve workplace safety and reduce accidents. As safety experts are not entitled to issue instructions or orders, the success of their work depends a lot on how they collaborate with cooperation partners inside and outside of their organisation (Trimpop et al., 2011). Typical cooperation partners are management, employees, safety representatives and works council but also occupational physicians and social accident insurance. Within the present study we investigate the effects of two factors related to the quality of safety experts' cooperation on accident severity.

Thereby, we expect that safety experts' *acceptance by cooperation partners* (Hypothesis 1) and the success of *collaboration with cooperation partners* (Hypothesis 2) are negatively related to accident severity of the following year. To test these hypotheses, safety experts of 232 Austrian organisations in the metal- and wood-processing industry were asked to evaluate their acceptance among management, employees, and safety representatives as well as the success of their collaboration with their cooperation partners. Accident severity was measured in the number of days of sick leave per accident in each organisation in the following year. In the first step of hierarchical linear regression analysis we entered number of employees and accident severity of the previous year as control variables. Number of employees was not significant ( $p = .765$ ) but accident severity of the previous year was ( $\beta = .18, p = .021$ ). In the second step we included the variables safety experts' acceptance by cooperation partners and collaboration with cooperation partners. Results showed a significant effect of safety expert's acceptance by cooperation partners on accident severity ( $\beta = -.25, p = .012$ ) but no significant effect of collaboration with cooperation partners on accident severity ( $p = .131$ ).

Limitations of the study concern that there may be aspects other than safety experts' self evaluation of their acceptance and collaboration that indicate the quality of their cooperation with others. However, this study is the first to investigate the long-term effect of the quality of safety experts' cooperation as a yet neglected variable in safety research. Thereby self-reported data from safety-experts with objective data about accident severity are combined. Findings show that good integration of safety experts reduces accident severity in the following year. Therefore, organisations should make effort in increasing acceptance of safety experts to improve their organisational workplace safety. Future research should investigate factors improving safety experts' acceptance by cooperation partners and possible intermediary processes of the tested relationship.

## O3: Safety and Well-Being: An Integrated Model Predicting Safety Behaviours

Julie Laurent<sup>1</sup>, Nik Chmiel<sup>2</sup>, Isabelle Hansez<sup>1</sup>

<sup>1</sup>University of Liège, Liège, Belgium, <sup>2</sup>University of Chichester, Chichester, UK

Since Hofmann, Jacobs and Landy (1995) emphasized the need to consider the influences of socio-organisational factors on safety, several studies have invoked psychological processes in order to interpret the relationships they identified between such organisational factors and safety outcomes. However, studies measuring effectively such psychological processes are quite scarce. Four distinct psychological processes have been identified as fundamental to predict safety behaviors: cognitive, motivational, instrumental and social exchange processes. Hansez and Chmiel (2010) have applied the job demands resources model (Bakker & Demerouti, 2007) to the safety domain, identifying three different safety specific (instrumental)



and non-safety specific (cognitive and motivational) psychological processes explaining safety violations. Our main aim is to integrate the four psychological processes, but also in-role and extra-role safety behaviours to the same model. More specifically, we aim at replicating Hansez and Chmiel's (2010) results on a different sample and integrating safety-specific social process to the model.

1,922 workers (71% response rate) returned a questionnaire including validated scales measuring job demands (work overload and role ambiguity), job resources (job quality, decision latitude and work support), job strain, job engagement, perceived management commitment to safety, routine and situational violations, safety participation and safety citizenship role definitions (SCRDs).

Data were analyzed using structural equation modelling and bootstrapping. Results showed that, as expected, our model followed the same patterns as Hansez and Chmiel's (2010) model, confirming the importance of cognitive-energetical, motivational and instrumental processes in the prediction of safety violations. Moreover, perceiving management as committed to safety leads workers to define discretionary safety behaviours as part of the job, which is linked to corresponding discretionary behaviours. Participating in such discretionary activities, in turn, leads to (1) lower situational violations, but also to (2) lower routine violations. These results confirm the importance of safety-specific social exchange processes in the prediction of safety violations.

Thus, it appears that different processes of reaction to working conditions can impact employee' safety behaviours. On the one hand, situational violations are impacted by a motivational process, as job resources encourage employees to be stimulated by their job, by an instrumental process, as perceiving management as committed to safety is directly associated with lower situational violations, and by a social process stemming from job resources (i.e. job resources allow employees to perceive their management as committed to safety, and they reciprocate this interest by defining safety as a part of their role, which encourages them to participate in discretionary safety activities). On the other hand, routine violations are impacted by the same social exchange (although to a lesser extent) and motivational processes, but also by a cognitive process, as demanding working conditions may provoke job strain, associated with more "corner-cutting".

A practical implication for companies who want to reduce safety violations is to consider safety-specific and non-safety specific processes together. That is, they can try to improve working conditions considered as job resources, but need to keep in mind that these resources determine more complex safety-specific social exchange processes, through the crucial influence of management.

#### **O4: How to Measure Safety Climate in Health Care Sector. An Adaptation of the Integrated Safety Climate Questionnaire**

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In the literature there is a general agreement about safety climate as a multilevel construct (Zohar, 2010) but often scales were not validated considering this safety climate characteristics. Shannon & Norman (2009), referring to factor analysis of safety climate surveys, affirmed the importance that a proper analysis requires adjustment to incorporate the multilevel nature of the data. The aim of this study is to validate a new version of the Integrated Safety Climate Questionnaire (ISCQ, Brondino, Pasini, Silva, 2013) customized for the health care sector.

As the original version, the questionnaire considers two organizational level and three agents generating safety climate: organization's management at organizational level, and supervisor and co-workers at the group level. For this reason the instrument is composed of three scales: Organizational Safety Climate (OSC) scale, Supervisor Safety Climate (SSC) scale and Co-workers Safety Climate (CSC) scale. OSC is referred to the workers perceptions on safety climate related to the entire organization, SSC measures perceptions on the real importance given to safety by the direct supervisor in the work-group and the CSC relates to the workers perceptions about the degree to which safety is a real priority for their colleagues in the work-group.

A two-level design was used, considering the individual level and the work-group level. Data collection, at the moment, involves 75 workers in health care sector, as a pilot study. The final sample will involve about 2500 workers, all from Italian organizations. According with Griffin and Neal research (2000), four climate dimension are explored: values, safety system, safety communication and safety training. This pilot study confirmed good psychometric properties, explored, at this stage, with a CFA. The second step, when more workers and a proper number of work-groups will be available, will consist in a MCFA to confirm the factor structure of the scales, and a SEM to explore the theoretical validity of the model, considering also some important criterion variables (e.g. safety outcomes, and other measures connected with well-being).

## **O5: Taking Work Home With You: The Impact of Work-related Rumination on Risky Commuting Safety Behaviors**

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Within the realm of occupational health psychology research, little attention has been paid to the impact that spillover from job experiences may have on the commute between work and home. For those who commute by driving an automobile, it is an activity that requires close attention in order to be carried out safely. Aside from the demands of the commute itself (e.g., vigilance required by traffic, physical demands of a long commute), spillover of work strains into affective preoccupation during the commute has the potential to interfere with safe driving behavior by utilizing important personal resources needed for the task. In this study, we examined the relationship between job strain and risky commuting safety behaviors, as mediated by work-related affective rumination, over the course of a five-day work week. Based on the spillover model, it was hypothesized that daily end-of-workday job strain would be positively associated with daily risky commuting safety behaviors. It was further hypothesized that work-related affective rumination would partially mediate this relationship.

Participants were 115 working adults recruited through Amazon's Mechanical Turk (MTurk). All participants were U.S. residents who worked full-time (i.e., 35 or more hours per week) and commuted to and from work via private vehicle on a daily basis. Data collection included a baseline survey and once daily surveys for five consecutive work days. Daily surveys took approximately 5 minutes to complete and participants were compensated for their burden.

Hierarchical linear modelling procedures (using HLM7 software) were used to test hypotheses. Daily observations (level 1  $N = 575$ ) were nested within individuals (level 2  $N = 115$ ). Variables in the models were modeled as fixed variables. Preliminary analysis indicated that the relationship between time and risky commuting safety behaviors was cubic ( $\pi = .05$ ,  $p = .018$ ), such that risky commuting safety behaviors increase, then decrease, then increase again over the course of the working week. Tests of the substantive hypotheses indicate that daily end-of-day job strain is significantly, positively associated with daily risky commuting safety behaviors

( $\beta = .26$ ,  $p < .001$ ), after controlling for level 1 travel speed disruptions and level 2: commute time, commute distance, schedule and job control. Further, results indicated that work-related affective rumination partially mediated the relationship between end-of-day job strain on risky commuting safety behaviors, with a Sobel test indicating that the indirect effect was significant (Sobel = 5.54,  $p < .001$ ).

The current study is one of the first to examine the spillover of job strain and work-related affective rumination on risky commuting safety behaviors, and it does so at the daily level in order to better understand the dynamics behind this phenomenon. The determination that job strain and work-related affective rumination spill over to impact the commute home suggests directions for designing organizational interventions that could improve safety behaviors during the commute. One recommendation worthy of consideration is to provide employees with programmed recovery time from daily stresses and strains at the end of the workday, in hopes of limiting this spillover into the commute.

## **O6: Stressful Relationships with Customers and Burnout: The Mediating Role of Emotional Labor**

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**Objectives:** The focus of the study is on extra-organisational social stressors. Research shows that social interaction with customers can be considered as a source of chronic stress outcomes, including burnout (Dormann & Zapf, 2004). Customer-related social stressors include hostile customer behaviours (i.e., negative attitudes and negative emotions revealed by customers in their dealings with employees) and disproportionate customer expectations (i.e., expectations that are difficult to meet, unclear/too high, beyond the standard service). In most service contexts, employees are expected to express positive emotions and hide negative emotions, regardless of their own feelings and customers' behaviour. Thus, when dealing with customers employees have to regulate their emotions in order to adhere to organisational display rules. Emotional labour (EL) is the process by which employees manage their true feelings in order to display organisationally desired emotions. Hochschild (1983) distinguished two forms of EL: surface acting (SA), i.e., modifying emotional displays without changing internal feelings, and deep acting (DA), i.e., changing the emotion felt in order to elicit the appropriate emotional display. The study was designed to examine whether and how stressful relationships with customers (SRWC) affect emotional exhaustion (EE) through their effect on SA and DA. Dispositional negative affectivity (NA) and positive affectivity (PA) were included in this study as control variables.

**Method:** The data was collected from 219 Polish workers (50.2% female) employed in the service industry. Participants were on average 30 years old and were employed as insurance customer service representatives and retail sales representative for one of the major cell phone carriers in Poland. SRWC was measured with the Stress-Inducing Customer Behavior Scale (Szczygiel & Bazinska, 2013). EL was measured with the Emotional Labor Scale developed by Bazinska et al. (2010). EE was assessed with the subscale of the Polish version (Pasikowski, 2000) of the Maslach Burnout Inventory-General Survey (Maslach et al., 1996). NA and PA were measured using the subscale of the Polish version (Brzozowski, 2010) of the Positive Affectivity Negative Affectivity Schedule (PANAS, Watson et al., 1988).

**Results:** To determine whether and how SA and DA affect the relationship between SRWC and EE a mediation analysis was performed. The analysis of mediation effects used a multiple mediation model with both SA and DA entered simultaneously using Preacher and Hayes' (2008) method for testing mediation. SRWC was the independent variable, EE was the dependent variable, and SA and DA were mediators. Results revealed that SA and DA partially

mediate the relationship between SRWC and EE. Moreover, results indicate that each form of emotional labour was a significant intervening variable in the mediation model. A contrast analysis revealed that the specific indirect effect through SA is larger in magnitude than the specific indirect effect through DA.

Discussion: As in previous studies, SRWC was found to be positively related to EE. Moreover, employees who declared greater use of SA during their interactions with customers reported more symptoms of EE. Finally, results indicate that EL is one of the mechanisms through which SRWC lead to burnout.

### **O7: Is Burnout Predicted by Job Stress? A Two-Wave One-Year Study**

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Introduction: Burnout has been assumed to result from job stress. However, evidence for a causal relationship between job stress and burnout is limited. In the present study, we examined the extent to which job stress and global stress predicted burnout one year later.

Method: A total of 249 French schoolteachers (mean age: 41; 71% female) took part in this two-wave one-year study (2014-2015). Burnout was assessed with the Maslach Burnout Inventory. Job stress was assessed with the Job Content Questionnaire (JCQ). The JCQ allows the investigator to assess work-related demands (9 items), control (9 items), and support (8 items). The Perceived Stress Scale (10-item version) was used as a measure of global (i.e., work-unrestricted) stress. Correlation and multiple regression analyses were conducted.

Results: At time 1 (T1), burnout correlated .26 with job demands, -.43 with job control, -.32 with job support, and .58 with global stress (all  $ps < .001$ ). Very similar correlations were observed among these variables at time 2 (T2). Regressing T2 burnout on work-related demands, control, and support at T1, we identified work-related demands ( $\beta = .16$ ,  $p < .01$ ) and control ( $\beta = -.27$ ,  $p < .001$ ) at T1 as predictors. When we adjusted for T1 burnout, however, only T1 burnout predicted T2 burnout ( $\beta = .61$ ,  $p < .001$ ). Regressing T2 burnout on T1 global stress, we found that T1 global stress was a predictor irrespective of whether ( $\beta = .17$ ,  $p < .01$ ) or not ( $\beta = .48$ ,  $p < .001$ ) we adjusted for T1 burnout. Finally, when placing all our predictors in the same regression model, we observed that T1 job control ( $\beta = -.16$ ,  $p < .01$ ) and T1 global stress ( $\beta = .40$ ,  $p < .001$ ) predicted T2 burnout before adjusting for T1 burnout. After adjusting for T1 burnout, only T1 burnout ( $\beta = .53$ ) and T1 global stress ( $\beta = .16$ ) predicted T2 burnout ( $ps \leq .01$ ). Work-related demands, control, and support at T1 were not associated with burnout at T2 (all  $ps > .45$ ). No multicollinearity problem was detected (all variance inflation factors  $< 2$ ).

Conclusion: The present study does not support the widespread idea that burnout is specifically induced by job stress. Remarkably, while baseline job stress did not predict burnout at follow-up, baseline global stress did, consistent with the view that a work-confined approach to burnout is problematic. All in all, our study questions the definition of burnout as well as its distinctiveness with respect to "context-free" depressive syndromes.

## **O8: Personal and Organizational Antecedents of Burnout: A Clinical Study**

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The aim of this study was to identify the key antecedents of burnout and work engagement, based on job demands, job resources, and personal resources. It is based on clinical burnout patients. Correlation analysis has shown work-home conflict, workload, role conflict, and mental load (only correlated with exhaustion) as key burnout antecedents. Distributive justice and task autonomy diminish exhaustion. Learning opportunities, participation in decision-making, supervisor support and interactional justice reduce depersonalisation. Self-efficacy, optimism, internal work locus of control, and organisational-based self-esteem foster dedication, whereas optimism and internal work locus of control facilitate vigour. Thus, job demands and personal resources are related to exhaustion and depersonalisation, whereas job resources decrease depersonalisation. The regression analysis revealed work-home conflict as a key component of the Job Demands-Resources model, while all other job demands and resources only added minor explanatory value.

## **O9: Burnout in Doctors Working with Palliative Care Patients: Systematic Review**

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**Introduction:** There are risks to the occupational health of doctors who work in palliative medicine because of the regular experience of patients' deaths and grieving families. Research shows that doctors suffer from various negative consequences to their health; one of the most often analysed is burnout. It is important to summarise these results in order to understand better what the scope of the problem is.

**Methodology:** The systematic review was performed in Web of Science database searching for studies analysing burnout in doctors who work with palliative care patients. Following PRISMA guidelines from the initial results of 14 705 articles, 27 studies were eligible for qualitative analysis: 18 articles used the same inventory, Maslach Burnout Inventory (MBI); 4 studies used other burnout inventories (2 studies Copenhagen Psychosocial Questionnaire; Medical Professional Burnout; Link Burnout Inventory); 5 studies did not use any scales, just separate questions to measure burnout. Articles were published between 1990 and 2014 and were from 13 different countries, with the highest number from USA (6).

**Results:** MBI consists of 3 dimensions describing burnout: emotional exhaustion (EE), depersonalization (D) and personal accomplishment (PA). Studies reveal that between 3% and 5.5% of doctors working with palliative care patients suffer from all 3 dimensions of burnout and from 28.1% to 52.3% have either of 3 burnout dimensions abnormal. Results from analysis of separate dimensions show that between 22% and 38% of doctors are suffering from high levels of EE and 7.5%-36.7% from high levels of D. The prevalence of PA varies the most: 2.5% - 62% of doctors have a feeling of low personal accomplishment. Results from other inventories are similar: from 6.3% to 61.67% of doctors are burnout. Mean scores for Copenhagen Psychosocial Questionnaire shows abnormal levels of burnout in all subgroups of doctors regardless the experience (residents, junior doctors, consultants).

**Conclusion:** Large number of doctors working with palliative care patients suffer from high emotional exhaustion, high depersonalization and low personal accomplishment. Up to 52.3% of doctors suffer from at least one abnormal burnout dimension. Understanding the occupational health problems caused by work in palliative medicine will help to plan and deliver appropriate intervention programmes.

## **O10: Burnout and Depressive Symptoms in Latent Group Analyses: An Exploratory Study**

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**Introduction.** Research in occupational and organisational research, specifically in occupational health psychology, has focused extensively on work-related burnout. However, recent research has questioned burnout's conceptualisation and nosological value. Arguments have presented that: (a) burnout and depression develop in tandem, or the one leads to the other, (b) burnout is actually depression, and (c) burnout and depression remain distinct entities. Specifically, the overlap of burnout and depression has been highlighted as concerning - which implores further research. This study applies latent group analysis in order to explore the number of groups and to ascertain any noticeable trends in these groups.

**Method.** The sample consisted of 399 teachers, with majority female participation. The homogeneity of the sample occupation was considered an advantage. Mplus 7.31 was used to perform the statistical analyses. A measurement model was specified with burnout and depressive symptoms as latent variables as indicated by the applicable items. The factor scores of the latent variables were then saved and exported into a new dataset. The new dataset was then used to explore latent classes/profiles within the data with mixture modelling. The BIC and entropy values were used to determine the optimal number of classes to retain. The lowest BIC value indicates the best fitting grouping, and the entropy value should ideally be above 0.80. A single plot was generated which visually presented all of the latent groups based their variable level. Cohen's d effect size was used to ascertain any differences in mean scores in all of the classes.

**Results.** The results revealed that the measurement model, from which the factor scores were derived, was a good fit to the data (CFI=0.95; TLI=0.94). The latent group analysis showed that a 5-class solution was the best fit to the data (BIC = 1442.11; Entropy = 0.81). Cohen's d showed only a small practical effect size difference between burnout and depression in one of the classes.

**Discussion.** The results indicated that there were 5 groups in the data. In this exploration, a general trend was noticed in that burnout and depressive symptoms were at similar levels in all of the classes, except for the lowest scoring class where the burnout level was lower compared to that of depressive symptoms. The finding evokes the concerns of researchers that argue burnout and depression to be the same phenomenon, but also supports researchers that posit that burnout and depression develop synergistically. Longitudinal studies are warranted.

**Conclusion.** Burnout and depressive symptoms appeared at similar levels in the sample, regardless of group membership. Future longitudinal studies are needed to definitively disentangle this issue.

## **O11: Creating a Meta-Analytically and Qualitatively Informed Instrument for Lost-Time Injury, Illness, and Disability in Nurses and Health Care Aides**

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**Background:** Despite their widespread use in other fields, empirically derived tools that predict harmful events, specifically lost-time injury, illness, and disability (IID) are markedly absent in the field of occupational health and safety (OHS). Those tools may help reduce the rates of injury, illness, and disability (IID), especially in high lost-time-rate professions, specifically



nursing. In Canada, nurses and health care aides (HCAs) have the highest sick days annually. This is alarming for workers, organizations, and such effects can be even felt by entire communities.

**Objective:** To translate the existing scientific knowledge on the predictors of lost-time IID in nurses and HCAs, and to create an instrument that predicts negative health occurrences. This study will focus on the results that will eventually be itemized into a predictive tool.

**Methods:** In keeping with an evidence-based approach to construct a risk assessment tool for nursing staff, this study used mixed-methods. First, in efforts to seek the literature for evidence, a systematic review and meta-analysis was used to identify correlates of lost-time IID among nurses and HCAs. Correlates of lost-time IID were also investigated using qualitative efforts and to gain a deeper understanding of such risk factors. A total of four focus group sessions took place with registered nurses (RNs; n = 8), registered practical nurses (RPNs; n = 8), HCAs (n = 8), and key informants in nursing and occupational health and safety staff (n = 5). Nursing personnel had a minimum of five years of health care experience and were recruited from hospitals and long-term care facilities in Sudbury, Ontario, Canada. Key informants consisted of union representatives for RNs, RPNs, and HCAs, disability management staff from local hospital, and a rehab specialist from a private insurance company.

**Results:** Results from the systematic review consisted of the following categories: (1) physical; (2) demographic; (3) organizational; and (4) psychosocial. Physical factors consisted of present health status, physical fatigue, history of sickness absence and musculoskeletal pain, including back, neck, and shoulder pain. Demographic/interpersonal factors included age (i.e., older than 40) and job tenure. Organizational factors included shift work, shift length, unit placement (i.e., paediatric and psychiatric), and the relationship between staff and leadership team, as well as between staff and colleagues. Psychosocial factors included depression, stress, and burnout. Focus group sessions were transcribed then analyzed using thematic analysis. Findings confirmed reports from existing literature and offered insight into how risk factors influence IID lost-time.

**Conclusion:** Nurses and HCAs continue to be at risk of lost-time IID as a result of the complex and multifaceted predictors that materialize from various sources.

**Implications:** Efforts from this study intend to fill the void of predictive tools in the OHS literature. It further intends to translate knowledge in a practical manner and seek its application in applied health contexts.

## **O12: The Perils of the Power Track: Long Hours and Work-Life Conflict Among Lawyers**

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Higher status workers tend to enjoy better well-being relative to their lower status peers. Yet, some evidence suggests that higher status professionals are exposed to certain forms of chronic stress that harm physical and mental health. The stress of higher status (SHS) perspective demonstrates that higher income, education, and occupational status tend to increase exposure to job pressure and work-life conflict (WLC)-patterns that reveal complexities in the relationship between social status and well-being. Most prior tests of the SHS hypothesis, however, involve occupationally heterogeneous surveys; little is known about how SHS dynamics operate within a higher status profession. Accordingly, we focus on one that arguably epitomizes higher status: lawyers.

Using a national survey of Canadian individuals admitted to the bar in 2010, this study seeks to: 1) evaluate the total association between income and well-being, 2) document the stratification of exposure to excessive work hours and WLC across income, and 3) investigate whether excessive work hours and WLC explain or suppress the relationship between income and well-being. Sector of employment (eg. private, public, and business) is also a marker of prestige within the legal profession, so we also document the distribution and consequences of long hours and WLC by sector.

Several key findings emerge. First, WLC and long hours increase in a linear fashion with income quintile. Likewise, those working in private firms report higher levels of spillover and long hours relative to those in the public sector and in business. These two patterns indicate preliminary support for the SHS hypothesis. In multivariate models, income is not significantly related to distress or overall job satisfaction. However, WLC and long hours suppress these associations—that is, after adjusting for chronic stress, the top two income quintiles become significantly more satisfied relative to the bottom quintile, and the top two income quintiles become significantly less distressed relative to those in the bottom quintile.

These results generally support the SHS hypothesis: income and prestige in the legal profession are positively related to chronic stressors. These stressors suppress the association between income and well-being: were it not for their longer work hours and greater WLC, higher earners would be more satisfied and less distressed than their lower paid peers. Conversely, the same stressors explain variations in satisfaction and distress between sectors: lawyers in the public sector are more satisfied and less distressed than those in private firms, and this is because lawyers in private firms experience more long hours and WLC. Similar patterns are observed for self-rated health and job control satisfaction.

One outcome stands out: power track satisfaction (which includes satisfaction with compensation, advancement opportunities, recognition received for work, etc.). When this is assessed, each income quintile is more satisfied relative to the lowest paid group, those in private firms are more satisfied relative their counterparts in other sectors, and adjusting for stress does not alter these effects. Collectively, our findings suggest that higher status individuals within the legal profession are satisfied with the very conditions that filter them into stressful circumstances.

### **O13: SMaRT Work: Stand More AT Work. The Development of Behaviour Change Strategies for Increasing Standing and Movement among Sedentary Office Workers**

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Background: High levels of sedentary behaviour (i.e., sitting) are a risk factor for poor health with high levels of sitting being linked with the development of Type 2 diabetes, heart disease, and cancer. With high levels of sitting widespread in desk-based office workers, office workplaces are an appropriate setting for interventions aimed at reducing sedentary behaviour. We designed a multi-component randomised control trial (RCT) called 'SMaRT Work: Stand More AT Work' to reduce occupational sitting time in sedentary office workers within the NHS.



Method: SMARt Work consists of two distinct phases: *intervention development* and *intervention delivery and evaluation*. We report only the *development phase* here. The development phase takes a community-based participatory research approach using the Behaviour Change Wheel (BCW). Focus groups with 35 office workers were conducted to collect detailed information to gain a good understanding of the most appropriate behaviour-change strategies, to sit alongside the provision of height-adjustable workstations, at the environmental, organisational and individual level that support less occupational sitting. At its core, the BCW has a model of behaviour change known as the COM-B model, with the central tenet that behaviour is an interacting system comprising of the three core components of capability, opportunity, and *motivation*. The focus groups identified the barriers and facilitators to reducing sitting at work and ascertained which COM-B components should be the primary focus of the intervention strategies.

Results: Our findings suggest that the biggest barrier to standing at work is the lack of any *physical opportunity*. With increasing work demands and expectations, participants didn't feel able to stand and move away from their desks. The provision of a height-adjustable desk or desk attachment should overcome this particular barrier. In addition, office workers may not have the *psychological capability* to stand more at work as knowledge about the work and health consequences of prolonged sitting is low. To target this, we will provide educational material, such as leaflets, as well as deliver seminars to educate office workers about the long- and short-term effects of prolonged sitting. It also became evident that while the provision of a height-adjustable desk and education might provide participants with the opportunity and capability to reduce their sitting time at work, office workers may lack the sufficient *motivation* to put that into practice. As such, we will provide participants with motivational tools to provide feedback on their physical activity and sitting time, prompts to encourage participants to break up their sitting time regularly, and set regular goals should they so wish.

Conclusion: Having completed the development phase of SMARt Work, recruitment and baseline data collection has now begun with the intervention due to start in January 2016.

#### **O14: Task-related and Socio-emotional Aspects of Communication in the Operation Room as Predictors (a) of Patient Outcomes, (b) of Surgeons' Predictions of Patient Outcomes, and (c) of Surgeons' Evaluations of Teamwork Quality**

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Communication in teams has a task-related and a socio-emotional aspect. The task-related aspect relates to communicating about the task in a way that ensures all team members know what is going on and what is to be expected, and can prepare their actions accordingly. The socio-emotional aspect relates to the emotional quality, as indicated by task-irrelevant communication, but also tension, joking, and the like. For group performance, both aspects are considered important: good task-related communication ensures a shared mental model and coordinated action; and good socio-emotional communication ensures a good team climate in which people feel accepted, and feel free to speak up (West, 2012). A recent study in surgical teams (Tschan et al., 2015) has found that task-related ("case-relevant") communication predicted performance. Case-relevant communication was related to a lower risk of surgical site infections after N = 167 long, open abdominal surgeries. However, high levels of socio-emotional ("case-irrelevant") communication were related to a higher infection risk.

This points to the possibility that socio-emotional communication may distract under some circumstances. However, the socio-emotional aspect is related to immediate feelings of satisfaction and trust, and team members may see it as an especially valid indicator of good cooperation (cf. West et al., 2003). We thus tested the prediction that socio-emotional aspects are seen as more important than task-related aspects by members of surgical teams in two studies, one related to the prediction of infections, the second one to judgments of teamwork quality.

Study 1: Surgeons predicting risk of infection. After N = 171 surgeries, surgeons predicted the probability that the patient would develop an infection, and we related their predictions to observed communication during the surgery. Results showed that communication during the surgery affected surgeons' forecasts. Contrary to the empirical findings in Tschan et al. (2015), socio-emotional communication was seen as being related to a reduced risk of infection. Case-relevant communication did not influence the predictions of experienced surgeons; however, residents predicted a higher risk for infection, when case-related communication was high, contrary to the empirical findings of Tschan et al.

Study 2: Surgeons assessing teamwork quality. After N = 106 surgeries, we asked surgeons to assess the quality of teamwork during the surgery, and we related these judgments to observations of communication during the surgery. Again, socio-emotional aspects were predominant in predicting teamwork quality. More tension was significantly related lower perceived teamwork quality, whereas task-related communication did not predict quality.

These studies suggest that the performance-enhancing function of task-related communication during surgeries is either ignored in surgeons' judgments (when judging teamwork quality) or even regarded as deleterious (when predicting risk of infection). By contrast, the socio-emotional aspect, represented by case-irrelevant communication and by tension, is regarded as an indicator for judging teamwork quality, and wrongly seen as a protective factor when prediction infection risk. The importance of task-related communication for smooth cooperation and, conversely, the double-edged character of socio-emotional communication, need to be emphasised more strongly in theory and research on teams in high reliability domains.

### **O15: The Effects of Job Demands on Police Officer Wellbeing: The Mediating Role of Job Burnout**

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Objective: The Job Demands-Resources (JD-R) model postulates that job demands and job resources constitute two process: the health impairment process, leading to negative outcomes, and the motivational process, leading to positive outcomes. The aim of the study was to verify the health impairment process in Polish conditions. Specifically, the study investigated the direct (H1) and the indirect (mediated via job burnout, H2) effects of job demands on depression and physical health in a group of police officers. Two types of job demands were taken into account in the study. The first is operational demands, which refers to critical incidents in police work, that can be harmful to physical and psychological health, e.g. physical threat, violence, exposure to danger, crime and facing the unknown. The second type of job demands is related to the organizational factors in police work, including management style, poor communication within the force, poor equipment, excessive paperwork, poor training, work shifts and inadequate salaries.

Methods: Data was collected from over 3000 Polish police officers (18% women). Job demands were measured with The Operational Police Stress and The Organizational Police Stress Questionnaires (McCreary and Thompson, 2006). The Oldenburg Burnout Inventory

(Halbesleben & Demerouti, 2005) was used to assess symptoms of job burnout. Mental health was measured using the Centre for Epidemiological Studies Depression Scale (Radloff, 1977), in turn physical health was measured with the Physical Symptoms Inventory (Spector & Jex, 1998). The regression analysis with bootstrapping, using the PROCESS macros of Hayes was applied.

**Results:** The results support the research hypotheses to large extent. Specifically, two types of job demands were associated with depression and poor physical health directly. The direct effect of organizational demands on mental and physical health was stronger than the effect of the operational demands. Job burnout mediated only the effect of the organizational demands (not the effect of the operational demands) on physical and mental health. The indirect effect of the organizational demands on mental health was stronger than the direct effect.

**Conclusion:** The results partially support the Job Demands–Resources model and provide further insight into processes leading to the high well-being of police officers in the workplace.

#### **O16: Epidemiology and management of occupational stress and musculoskeletal disorders in Cypriot firefighters**

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Previous research has shown that firefighters steadily confront high job stress and are vulnerable to developing post-traumatic stress disorder affecting their duty performance and threatening both their health and safety of the public. The present study attempted to explore occupational and post-traumatic stress, and musculoskeletal disorders in a sample of 430 Cypriot firefighters. In the context of the study, both quantitative and qualitative data was collected. A focus group approach was used to collect qualitative data. The focus group discussions took place in conference rooms of the Cyprus Fire Service, lasted around two hours each, and were led by a trained facilitator who used semi-structured questions. Thematic analysis was used to analyze the qualitative data. Qualitative results strengthen quantitative findings by exploring in depth occupational stress factors, perceptions regarding stress consequences and coping mechanisms. The analysis revealed that younger age, longer job experience, lack of control, severity of episodes, victims' characteristics, increase of dangerous materials (e.g. chemical substances used in factories), bystander reactions, and firefighters' ways of mobilizing add to psychological and physiological stress. Regarding perceptions of stress consequences, the analysis showed that participants demonstrated difficulty in identifying the experience of stress either for themselves or their colleagues, even though they showed awareness of stress consequences to their well-being. Several coping mechanisms were also identified, namely, use of humor, talking to workmates, acceptance and repelling. Based on the study results, we advanced an evidence-based written policy for occupational stress management and musculoskeletal disorders to promote health and well-being in fire fighters.

#### **O17: The Association between Work-life Balance, Cortisol Patterns and Depressive Symptoms in the Whitehall II Study**

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Work-family conflict occurs when the demands of an employee's role conflict with the demands of a family role, such as being a parent, spouse or carer. Work-family conflict has been associated with adverse health-related outcomes such as depression and hypertension. Cortisol is a biomarker indicator of stress and has been linked to health problems such as

cardiovascular disease and may play a role in these associations. Previous studies have indicated an association between cortisol and work related factors. However, the association between cortisol and work-family conflict has not been examined. The present study will use data from the Whitehall II study to explore the association between work-family conflict and diurnal cortisol patterns and depression in cross sectional and longitudinal analyses. Work-family conflict is assessed in Whitehall II using a series of 8 questions, 4 of which measure work to family interference (WFI) and 4 which measure family to work interference (FWI). Work-family conflict was measured at three time points; waves 3 (1991-1994), 5 (1997-1999) and 7 (2002-2004) while salivary cortisol and depressive symptoms using the CES-D (Centre for Epidemiologic Studies Depression Scale) was assessed at wave 7. Individuals reported more WFI than FWI over the three time points (18.4% vs. 10.4% respectively,  $p < 0.001$ ). Men reported more WFI than women (84% vs. 76%,  $p < 0.001$ ). However FWI was not significantly different for men and women. Neither WFI nor FWI were associated with diurnal cortisol patterns in either men or women, while both WFI and FWI were associated with depressive symptoms (FWI:  $\beta = 2.64$  (0.17),  $p < 0.001$ , WFI:  $\beta = 2.23$  (0.16),  $p < 0.001$ ). These findings could encourage employers to implement work-place policies, in order to reduce adverse health related outcomes.

### **O18: When it Comes to Family and Career, Good is Stronger than Bad! - Effects of Work-Life Enrichment and Conflict on Career Disengagement**

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In this study, we investigate the role of family-to-work enrichment and family-to-work conflict for an important career-related outcome, namely career disengagement. Gerber, Wittekind, Grote, and Staffelbach (2009) show the relevance of being disengaged from one's career for other career constructs such as lower reported income and shorter tenure. Drawing on Bandura's social cognitive theory (2001), we postulate that family-to-work enrichment is positively associated with career self-efficacy because it makes mastery experiences at work more probable. Similarly, we hypothesize that there is a negative relationship between family-to-work conflict and career self-efficacy. Career self-efficacy should, in turn, have a negative effect on career disengagement. Furthermore, we aim at replicating previous research and test the positive relationship between a home resource (i.e., private support) and family-to-work enrichment as well as the positive association between family demands and family-to-work conflict.

We provided our 123 participants (80 women; i.e., 65 per cent) two online questionnaires. To ensure the relevance of our results, all participating employees had child-care responsibilities and were younger than 46. At T1, we measured private support, family demands, family-to-work enrichment and family-to-work conflict and, at T2, we assessed career self-efficacy and career disengagement. To test our hypotheses, we ran a path-analysis with Mplus in which controlled for gender.

A path-analytical test showed that the hypothesized model had no satisfactory fit ( $\chi^2(9) = 15.88$ ; RMSEA = 0.08; TLI = 0.88; CFI = 0.76). The inspection of the paths coefficients supported our hypotheses. Support was positively related to family-to-work enrichment, while family demands were positively related to family-to-conflict. There was a positive relationship between that family-to-work enrichment and career efficacy. The negative effect of family-to-work conflict on career self-efficacy was only marginally significant. Finally, the relationship between career self-efficacy and career disengagement was negative. When additionally modelling family-to-work enrichment and conflict as antecedents of career disengagement, the

model fit significantly improved ( $\Delta\text{Chi}^2 = 9.41$ ,  $\Delta\text{df} = 2$ ,  $p < 0.01$ ; RMSEA = 0.00; TLI = 1.00; CFI = 1.024). The association between family-to-work enrichment and career disengagement was negative, while there were only marginally significant effects of family-to-work conflict and career efficacy on career disengagement.

With our study design we cannot establish causality. That means people who are less disengaged from their career might experience more family-to-work enrichment because they might be more willing to transfer resources from home to work. Furthermore, we relied on self-reports only which might have caused a common method bias. Nevertheless, the results have theoretical and practical implications. We show that for the relationship between family and career, constructs with a positive valence (i.e., family-to-work enrichment) have a higher relevance. This contradicts the "bad-is-stronger-than-good" hypothesis (Baumeister, Bratslavsky, Finkenauer, & Vohs, 2001). Furthermore, we identify career self-efficacy and family-to-work enrichment as leverages to fix the glass ceiling (i.e., the propensity of women to be underrepresented on higher career levels). Future research should investigate the role of the supervisor for the career self-efficacy of employees with child-care responsibilities.

### **O19: Understanding Work – Work Conflict**

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**Introduction:** Having two jobs in developing countries is possible when there is a relative economical growth, still insufficient to assure with one salary, a family subsistence or a desired lifestyle. In developed countries, inappropriate financial habits and professional practice of Teachers, Doctors, Attorneys, Politicians and Artists, could lead people to have two jobs.

In such circumstances, traditional models of Psychosocial Risks Evaluation and Management could not be comprehensive enough to lead to efficient risk's assessment, organizational policies or health promotion programs, because their one - job - oriented basis.

**Objective:** To present an overall view over work – work conflict, as a preliminary step toward more comprehensive Psychosocial Risks Management Systems.

**Method:** Statistical data and Psychosocial Risks research papers were reviewed. Direct Interviews, to a sample of 125 workers and employees of different productive sectors, were also applied.

**Results:** Statistical data about this topic was not found in government's sources. Some private studies state that in United States, nearly 5% of the workforce has two jobs. The amount rises to 30% or even 57% of the workforce in some developing countries like Mexico.

Research papers talk about having two jobs only when analyzing women's work, as a combination of a formal work and housekeeping. The OIT's encyclopedia only refers that some studies from the 1950's, showed that people who work two jobs at a time, or who work overtime for long periods, have a relatively higher risk of heart attack, even at a young age.

From direct interviews we obtained the following descriptive data:

Work - Work Conflict (WWC) is facilitate by different possible combinations of formal, informal, permanent and temporary jobs:

WWC, arises when someone has developed an economical or emotional dependence toward two jobs, and:

- Both jobs, demand employee's presence in extraordinary schedules.
- Both jobs demand high performance's levels.
- One employer (or both) introduce changes in schedules, shift time or social activities.
- Worker's resources are surpassed by the demands of one or both jobs.

- When there's a training program or a certification process to be accomplished in order to preserve the work relationship and it overlaps time between jobs.
- When the reposition time is insufficient to reestablish physical stability.
- When there are unhealthy conditions in one or both jobs

The outputs could be: Lack of Concentration, Sleep Disorders, Burnout, Anxiety Disorders, Depression, Presenteeism, Auto Medication, Drug Abuse, poor Work Performance, and Enhanced Work – Family Conflict. It also has a negative effect on Work Engagement, Self-Esteem and Social Support. In critical levels, WWC, complicated with economic stress and gradual deterioration in quality of life, could lead to suicidal thoughts or attempts.

Conclusions: WWC is a barely known Psychosocial Risk that needs to be identified and analyzed in order to understand its effects on people's health and to develop more comprehensive Psychosocial Risk', Assessment and Management Systems, specially in developing countries. A preliminary theoretical model of WWC is developing as a result of this work.

## **O20: The Crossover of Work-Family/Family-Work Conflict, and Self-Efficacy in the Context of Demands and Stress in Work and Family Domain**

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The aim of the study was to examine the within-couple crossover effects of work-family (WFC)/family-work conflict (FWC) and self-efficacy to manage this conflict in the context of work- and family-related demands and perceived stress. We expected that the effect of demands on stress would be transmitted first via the increase in WFC/FWC and subsequently the decrease in self-efficacy and that both the WFC/FWC and self-efficacy would affect not only individual's own stress but also the stress of the partner.

We verified these hypotheses in a two-wave study of 130 dual-earner, heterosexual couples. We employed the actor-partner interdependence model (Kenny, Kashy, & Cook, 2006) as the framework for data analysis which allowed us to simultaneously test for actor (individual's outcomes are predicted by their own scores) and partner effects (individual's outcomes are predicted by their partner's scores). Dyads were distinguishable with gender as distinguishing variable. In order to test the hypotheses, structural equation modelling was conducted. We tested two models, separately for job and for family demands (Model 1 and 2, respectively). Maximum likelihood estimation method was used to test the fit of both models. The good fit of Model 1 was confirmed with the indices: CFI = .994. SRMR = .038 and RMSEA = .024, all presenting acceptable values. The indices for Model 2 presented less acceptable values: CFI = .930., SRMR = .052 and RMSEA = .097. Therefore, we modified this model by including additional paths namely, the crossover of women's family demands on men's FWC and men's family demands on women's FWC. This crossover is theoretically justified as demands in the family domain are shared by cohabitating partners. This modification resulted in the better fit of the Model 2 (CFI = .983., SRMR = .034 and RMSEA = .053).

Results indicated that women's ( $B = .78$ ,  $SE = 0.13$ ) and men's ( $B = .84$ ,  $SE = 0.14$ ) WFCs were predicted by their own job demands (actor effects). Family-work conflict of men was predicted only by their own family demands (actor effect;  $B = .75$ ,  $SE = 0.13$ ) but FWC of women was predicted both by their own (actor effect;  $B = .67$ ,  $SE = 0.12$ ) and their partners' family demands (partner effect;  $B = .45$ ,  $SE = 0.13$ ). Additionally, we found actor effects for the relationship between WFC and self-efficacy for both women ( $B = -.13$ ,  $SE = 0.04$ ) and men ( $B =$



-.19, SE = 0.05) and between FWC and self-efficacy (women: B = -.28, SE = 0.04, men: B = -.19, SE = 0.05). No relationship was found between self-efficacy and the perceived stress. However, we did find the effect of women's WFC on men's perceived stress at work (partner effect; B = .11, SE = 0.05 ) and at home (partner effect; B = .10, SE = 0.05) as well as the effect of men's FWC on women's stress at home (partner effect; B = .16, SE = 0.05).

## **O21: Workstyle and the Development of Musculoskeletal Pain among White Water Raft Guides**

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Background: Work-related Musculoskeletal Conditions (WRMSCs) are the most common type of work-related health problem in the EU accounting for a higher proportion of sickness absence than any other health condition (EASHW, 2010). Risk factors for WRMSCs can be found in almost every workplace but WRMSCs are more common in situations where there is exposure to forces on the body, repetition of movement and where the physical workload is high (Harcombe, 2010).

'Workstyle' is conceptualised as a learned and reinforced strategy for completing, responding to, or coping with increased job demands. Further, it is suggested that workstyle may predispose an individual to an increased risk of developing work-related upper-extremity symptoms and this risk is increased when there is additional ergonomic risk factors (Feuerstein, 1996). Adventure tourism is a rapid growth area in Europe with a 27% increase in participation. The demanding nature of leading adventure activities such as white water rafting can have adverse effects on the health of raft guides. Commercial white-water rafting is growing in popularity in the EU (European Outdoor Group, 2013), yet despite this there has been very little research examining the work-related health of white water raft guides.

The objective of this study was to explore self-reported work-related health among a sample of white water raft guides working in the UK. Specifically, the study aimed to identify how reported work practices and workstyle might influence the development of WRMSCs. Method: Semi-structured interviews were conducted with 20 qualified white water raft guides in the UK. Each participant was also asked to complete the Nordic Musculoskeletal Questionnaire [NMQ] (Kuorinka et al., 1987). This was analysed to produce frequency data on musculoskeletal pain. The qualitative interview transcripts were analysed using Thematic Analysis as described by Braun and Clarke (2006).

Results: All participants reported that the nature of white-water raft guiding and associated workstyle (maintaining a sustained physical performance) presented a risk of developing a WRMSC. This was attributed to the physical demands placed on the body and the client-focused approach of the work. Back pain was the most prominent WRMSC reported with the majority of participants (n = 17) having experienced back pain in the twelve months prior to interview. Participants reported obstacles to effective management of WRMSCs including the contract nature of employment whereby guides are not protected with sick pay. Participants recognised that the accumulative effects of exposure to force and rotation whilst white-water raft guiding may limit the longevity of the occupation for some individuals.

The findings from this study suggest that white water raft guiding is a challenging occupation with guides being at high risk of sustaining a WRMSC. However, participants also reported high levels of enthusiasm for their work and described physical and psychological benefits of work. The findings of this research can inform the development of training guidelines for white-water raft guides.

## **O22: Return to Work after Cancer: Development of Guidance for Safety and Health Based on Case Study Research**

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**Background:** An estimated 14.1 million adults globally were diagnosed with some form of cancer in 2012. Although the rates are increasing, the numbers of people surviving cancer and aiming to return to work are also increasing. Our understanding of the safety and health implications of returning to work after cancer are still limited although there is much more research evidence available in relation to occupational health and human resource management of this process. This research project, funded by IOSH has carried out an in-depth review of the safety and health factors that impact on return to work after cancer. Following the review, a case study methodology was developed and implemented in ten organisations that had an employee that had returned to work after cancer. The good practice from these case studies was then used to inform the development of usable guidance for those involved in the occupational safety and health field.

**Methodology:** Building on the review, the case study methodology was developed to include interviews with the individual who had returned to work and the stakeholders who had been a part of this process. The interviews covered aspects of workplace adjustments or changes made at work; assessment of the awareness of safety and health of those involved in the process; details of the return to work process and ease of finding information on implementing advice and information on return to work after cancer.

**Results:** Ten organisational based case studies were carried out across a sample of large, medium and small organisations and manual and non-manual work. Collated information from both the in-depth review and the case studies was then mapped onto good practice to enable the development of evidence based guidance. At the current time this includes the importance of regular individualised risk assessments for those who return to work after cancer considering the health and wellbeing of the individual as well as understanding that changes may occur over long time periods. The guidance is being designed to be publicly available through the IOSH web-site to allow as wide a dissemination route as possible.

## **O23: The Relationship Between Psychological Age and Facets of Health Over Time: The Moderating Role of Chronological Age**

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Chronological age (CA) is frequently used as representative of events and behaviors that are typical to the aging process. An underlying assumption is that individuals who share a common CA are highly similar in regards to health related abilities and limitations. CA is central to the epidemiologic concept of the cohort effect. However, the rate and onset of physiologic change vary considerably within age groups; and the onset and prevalence of chronic diseases are similarly incongruent with strict age delineations. Because of this, researchers have advocated for alternative measures of individual age (e.g., Hedge, et al., 2006; Truxillo & Fraccaroli, 2013). Psychological age (PA), the subjective assessment of one's own age (e.g., felt age, i.e., the age one feels; and discrepancies between felt age and chronological age), has been used across a range of disciplines and a relationship between health factors and PA has consistently emerged. However, the bulk of this research has been conducted among older, community



dwelling individuals; cross-sectional; and engaged with a single facet of health. The direction of the relationship (i.e., PA to health, health to PA, or through a reciprocal relationship) and the consistency of the findings across ages and different aspects of health remains unclear.

Support for both causal directions has a basis in theory. Stereotype embodiment theory (SET; Levy, 2009) purports that personally held age stereotypes manifest as health outcomes, while social comparison theory (SCT; Festinger, 1945) characterizes health cues acting as antecedents to personal construals of age. This study explores these issues by extending the PA-health investigation to working adults and examining these relationships longitudinally for several facets of health. Specifically, we focus on longitudinal relationships between health and PA. Age groups (less than 50 years old, 50 years old and older) will be considered as modifiers of these relationships. A sample of 409 workers (71.4% male, mean CA at T1 = 48.3, SD = 9.67 years) from six medium-sized light-manufacturing companies in the USA participated in a 3-wave longitudinal study on work capacity and aging. Felt age, chronological age, and measures of health (physical and functional) were assessed by survey at each time point, with a time interval of approximately 1.5 years between assessments. PA was operationalized as the proportional discrepancy between FA and CA, with scores interpreted as the percentage older or younger an individual feels compared to his or her CA. Cross-lagged panel path analyses were conducted to examine the direction of influence between the PA and health factors.

Results suggest that age group affects the nature of the PA-health relationship, and that the pattern of the relationship varies for different facets of health. Consistent with SCT, health was an antecedent of PA for the under 50-age group, but only for functional health; for these individuals there was no relationship between physical health and PA. For the 50 or older group there was evidence of PA influencing both physical and functional health, supporting SET. Future research should consider the role gender and employment status have in the PA-health relationship.

## **O24: Are Older Workers More Susceptible to Psychosocial and Physical Work Factors? Musculoskeletal Symptoms in Irish Health Care Therapists**

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**Objectives:** The population of most European countries is ageing. This trend coupled with increased retirement age has resulted in an increase in the proportion of older workers in the work force. The implications have been discussed controversially in practice and research. One position holds that older workers are more vulnerable to the exposure of stressful work conditions due to a decline in functional capacities. In contrast, another position holds that they are more resilient to work exposures because of higher work experience.

The objectives were to (1) examine whether older workers were more affected by physical and psychosocial work factors in relation to work-related upper limb symptoms (ULS); (2) systematically exclude non work-related explanations for ULS, e.g. socio demographics, leisure time injury, smoking, obesity and depression. We studied physio- and physical therapists, an occupational group known for a high prevalence of ULs due to exposure to physical risk factors including repetitive precision finger and arm motions while applying pressure.

**Methods:** We sampled 347 practicing Physical Therapists, Chartered Physiotherapists in hospitals and private practice and Sport Therapists. The Nordic Questionnaire was used to ascertain the 12-month prevalence of UL symptoms and UL incapacitating symptoms by body site (neck, shoulder, elbows, wrists, thumbs, fingers); selected scales of the Copenhagen

Psychosocial Questionnaire (psychosocial risk factors: quantitative demands, tempo, emotional demands; and work resources: influence at work, predictability of work and social support) and the Borg Physical Exertion scale as indicator of physical work load. We conducted logistic regression analyses with psychosocial and physical work factors and ULs. Analyses were stratified by age group; younger workers ( $\leq 45$  years,  $n=255$ ) versus older workers ( $>46$  years,  $n=90$ ) and adjusted for sex, seniority, employment status, hours of manual therapy, body mass index, depression, leisure time UL injury and smoking.

Results: 26% (95%CI 20.9-30.3) of therapists experienced incapacitating ULS that had interfered with daily activities in at least one body site. The annual prevalence of ULS of any severity was 83% (95%CI 78.4-86.6). Both estimates did not significantly vary by age possibly due to the healthy worker survivor effect. Incapacitating ULs significantly increased with seniority. Associations of psychosocial work factors with ULs or incapacitating ULs were generally stronger in older workers with the exception of social support. Specifically, work tempo, emotional demands, predictability, influence and physical effort showed significant associations with ULs in older workers, e.g. the odds of ULs were reduced by almost 50% with high levels of predictability at work (adj. OR=0.51,  $p=0.045$ ) in older workers with no association young workers (OR=0.92,  $p=0.28$ ). In contrary social support by peers and co-workers was more strongly and significantly associated in younger workers.

Conclusions: The stronger associations between psychosocial and physical work factors and ULs suggest that older workers may be more vulnerable to stressful psychosocial and physical job factors, however also capitalise more on work resources such as influence at work and predictability. Younger workers may particularly benefit from social support in relation to ULs. Age-sensitive prevention of ULs is paramount.

## **O25: Prevalence of Low Back Pain in Employed and Self-Employed Physiotherapists, Physical and Athletic Therapists in Ireland Compared with the National Working Population**

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Background: Worldwide, 37 percent of low back pain (LBP) has been deemed to be attributable to occupational risk factors. Therapists in health care, including physiotherapists, physical therapists and athletic therapists, have been identified as a high-risk occupational group for the development of LBP due to the combination of prolonged stooping, repetitive low-risk and infrequent high-risk lifts as part of their workday tasks. Previous research has focused primarily on employed therapists without much attention to self-employed therapists. Within the international literature, no studies have been identified that compare prevalence rate of LBP between therapists and the national working population. This investigation is essential to determine whether therapists are a high-risk occupational group for the development of LBP. The objectives of this study were [1] to establish the prevalence of LBP among therapists in Ireland for both the employed and self-employed [2] and to compare employment status specific LBP prevalence rates among therapists and the national working population, and [3] to estimate the adjusted odds of developing LBP among therapists relative to the national working population.

Methods: Data from the Health In Hand Intensive Tasks and Safety (HITS) study and the third national Survey on Lifestyle, Attitudes and Nutrition (SLÁN) were analysed. The HITS study was a cross sectional study investigating work-related musculoskeletal disorders in practicing therapists in Ireland. The Survey on Lifestyle, Attitudes and Nutrition (SLÁN) 2007 was a face-

to-face interview study of Irish adults. The final sample size for data analysis in the HITS data was 347 therapists. This included 141 currently practicing physical therapists and athletic therapists (response rate: 76%), 135 chartered physiotherapists in private practice (response rate: 54%) and 71 hospital-based chartered physiotherapists (response rate: 31%). The overall sample size for SLÁN 2007 was 10,364 respondents, corresponding to a response rate of 62%. Only the working population of SLÁN 2007, 5,862 respondents, was included in this analysis

Results: LBP prevalence in therapists was 49% (95% CI 43%-54%) with no significant difference by employment status. The LBP prevalence in the past 12 months within the national working population of SLÁN 2007 was 16 percent (95% CI 15%-17%) with a small but significant difference between self-employed (18%) and employed individuals (16%) ( $P < 0.05$ ). Therapists were nearly five times more likely to suffer from LBP than the national working population after careful adjustment for differences in socio-demographics (adjusted odds ratio: 4.8, 95% confidence limits 3.8 - 6.1,  $P < 0.001$ ).

Conclusions: This study indicates that both employed and self-employed therapists in Ireland are high risk occupational groups for the development of LBP. Therefore, further research to investigate workplace risk factors affecting this unique occupational grouping is warranted, including targeting this group with prevention measures and providing guidance on appropriate risk management and coping strategies to reduce and mitigate against the prevalence of LBP.

## **O26: From the Antecedents to the Consequences of the Temporary Agency Workers' Motivations: A Look through the Perspective of the Self-Determination Theory**

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Organizations around the world are increasingly using temporary work and due to this labor market trend some concerns have arisen regarding the consequences of temporary employment in terms of workers' attitudes, behaviors, and their well-being at work. In fact, previous studies have noted that researchers should not simply assume that all the theoretical background developed in the past with permanent workers, who have an ongoing employment relationship, will apply equally well to temporary workers. Among several psychological constructs, the study of temporary workers' motivations has emerged in the literature as a critical avenue for understanding the consequences of this employment arrangement, both for workers and for organizations. Motivations represent the underlying reasons why people choose to perform an activity, and according to the self-determination theory (SDT), there are different reasons why individuals initiate and persist in a specific course of action. Considering the importance of understanding which contextual variables contributes to the workers' motivations, and which results should be expected from workers based on the motivations they have for being a temporary worker, the present study focus both on the antecedents and consequences of different kinds of workers' motivations. Accordingly, with a sample of 3983 temporary agency workers (TAW - a specific category of temporary workers where the worker is an employee of the temporary work agency, but works at the location of the client organization), we used the PROCESS macro developed by Hayes (2013) to test a mediation model that includes analyzing the relationship between the double perceptions of organizational support - from the client organization and temporary work agency - and workers' motivations for being TAW. Furthermore, the relationship between workers' motivations and their well-being levels at work (assessed by their work engagement) was analyzed, as well the relationship between work engagement and workers' performance (self-reported by workers). In general, and according to what was predicted by SDT, the results provide support to the importance of workers' perceived organizational support to motivations. However, contrary to the expectation the double perceptions of organizational support also significantly contribute to

controlled motivations (with a higher extrinsic nature). Although this contribution has been found to be significantly lower compared to what was observed with autonomous motivations (with a higher intrinsic nature). Surprisingly, the different types of motivations were significantly related to work engagement, even though autonomous motivations (with a higher intrinsic nature) seem to be more important for this well-being variable at work. In addition, work engagement was positively related to workers' performance. The results also indicated the presence of a serial mediation model where motivations and work engagement act as mediators of the double perceptions of organizational support and workers' performance. The practical implications of these findings for the management of TAW are discussed.

## **O27: The Crossover of Job Insecurity in Dual-Earner Couples**

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Job insecurity is one of the most prevalent stressors in the workplace and is negatively related to favorable organizational and individual outcomes, for instance psychological health or organizational commitment (Sverke, Hellgren, & Näswall, 2002). Concerning the antecedents of job insecurity, most research has focused on individual and organizational predictors. In contrast, few studies have taken individuals' private context into account. Consequently, we know little about the processes that take place in couples when one partner is experiencing job insecurity. This study investigates the crossover (i.e., the intra-dyadic transmission) of job insecurity in dual-earner couples. Based on self-efficacy research (Bandura, 1997), we assume that the crossover of job insecurity from Partner A to Partner B is mediated by Partner B's vicarious experience and verbal persuasion. Additionally, we expect that Partner A's employability moderates the relationship between Partner A's job insecurity and the mediators.

To test our assumptions, we conducted an online survey with 96 dual-earner couples (i.e., 192 individuals). The participants had a mean age of 38.6 years (SD = 9.3) and 50.0% of the couples had children. Both partners responded to the same questionnaire. We asked participants to assess their job insecurity. Additionally, they rated their partner's employability and the level of vicarious experience and verbal persuasion (that means, how much their partner served as a career-related role model and verbally encouraged them). Using the Actor-Partner-Interdependence model (Kenny, Kashy, & Cook, 2006), we investigated two crossover-effects per couple. Thus, for heterosexual couples, our analyses reflect simultaneously how her job insecurity crosses over to him and how his job insecurity crosses over to her. Our results provided evidence for a crossover of job insecurity in couples. Partner A's job insecurity was negatively related to Partner B's vicarious experience. This negative effect was buffered by Partner A's employability. Partner B's vicarious experience, in turn, was negatively related to Partner B's job insecurity. Additionally, the investigation of conditional indirect effects supported the assumption of a moderated mediation: If Partner A's employability was low, the indirect effect of Partner A's job insecurity on Partner B's job insecurity via Partner B's vicarious experience was significant. If Partner A's employability was moderate or high, this indirect effect was no longer significant. For verbal persuasion, we did not find any significant effects. As we used a cross-sectional design, we cannot provide evidence for causality. An alternative explanation for our results could be homogamy: Since the beginning of their relationship the two partners might be alike in certain characteristics (e.g., education). They also share a similar environment, possibly leading to a similar perception of job insecurity. Moreover, we cannot rule out common-method variance because we relied exclusively on questionnaire data. Nevertheless, our study has theoretical and practical implications. We showed that job insecurity depends not only on work-related determinants, but also on the social context. Thus, job insecurity might have negative consequences not only for the focal person, but also for his or her partner. Future research should investigate the consequences of this crossover-effect in a longitudinal design.

## **O28: The Impact of Job Insecurity on Health and Wellbeing in Europe**

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The overarching aim of this study is to provide cognizance on the relationship between job insecurity and health for employees in Europe. The study also focuses on employees with history of cardiovascular disease (CVD), which hitherto is one of the most prevalent non-communicable diseases (NCDs). The study is underpinned by the biopsychosocial model of health (Engel, 1977) and seeks to investigate the levels of perceived job insecurity and their link to health status, wellbeing and health-risk behaviours. Employability, financial security and responsibility to dependents will be explored as moderators due to findings in the literature.

The datasets used for this study were taken from the European Working Conditions Survey (EWCS) 2010 and the European Quality of Life Survey (EQLS) 2012 by Eurofound. A randomly selected sample of workers across Europe, both employed and self-employed adults aged 18-65, was interviewed face-to-face by the Eurofound team for the EWCS 2010 and the EQLS 2012. The participants were numbered approximately 44,000 for each survey; the entries of the datasets were 43,816 (EWCS) and 43,636 (EQLS) from the EU27, Norway, Croatia, the former Yugoslav Republic of Macedonia, Turkey, Albania, Montenegro and Kosovo. Multiple regressions and multilevel structural equation modelling were employed for the current study using SPSS and Mplus.

The results aim to add knowledge on the impact of job insecurity on health and health-risk behaviours for employees with and without CVD history in Europe. Results also present the extent to which employability, financial security and responsibility to dependents moderate the relationships between job insecurity, health status, wellbeing and health-risk behaviours. The study supports the implementation of the World Health Organization revised Action Plan for the prevention and control of NCDs (2013). The provision of evidence will help with informing policies related to health protection and promotion and employment protection.

## **O29: The Impact of Previous Employment Status in the Employment Relationship of Temporary Agency Workers**

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Temporary Agency Workers (TAW) are involved in a double relationship: the one with the employer agency that hires them with a formal contract; the other with the client organisation where they actually carry out their work even if they are not directly hired by him. The employment relationship is an important resource for TAW's motivation and well-being. TAW as well as standard employees develop affective commitment, but differently from other workers, because they have a double relationship, TAWs show a double affective commitment. This study proposes that Perceived Organizational Support (POS) from both organisations and affective commitment toward both organisations are dependent from the TAW previous employment status. Our hypotheses were tested with a sample of 3550 TAW that had different previous employment status: 1813 unemployed; 479 employed in another agency; 604 employed directly in a company; 427 first employed; 227 self-employed. Data were analysed with ANCOVA analysis by controlling agency tenure and client tenure. We verified that those

TAW that were previously unemployed had highest POS from agency and from client and had also the highest affective commitment toward both organizations. On the contrary, TAW previously employed in another agency of temporary work had the lowest POS from both companies and the lowest affective commitment toward them. These findings showed the important role of previous experience in the double employment relationship of TAW. Probably, these previous employment statuses have an influence on expectations and on the meaning attributed to temporary work: for unemployed is an opportunity to overcome a threatening situation; for those that maintain this status is an obstacle to obtain a permanent position as they desire.

### **O30: Developing a Mental Health Promotion Intervention in Unemployment and Temporary Work Contexts: Results from a Delphi Panel**

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**Introduction:** Portugal is facing the effects of a recent economical crisis endorsing a long-term financial austerity policy. The deleterious impact of economical crises on mental health has been well established in different countries. Psychological support programs have been developed and tested for protecting mental health among the unemployed, though the main focus has been most usually targeted to sociocognitive skills promoting reemployment. There is lack of consensus about which types of intervention are most effective for promoting resilience and mental health when facing unemployment or temporary work.

**Goals:** To create expert consensus regarding community-setting intervention programs for promoting mental health among unemployed and temporary workers; to select variables for assessing such a program effectiveness. These goals represent a first step of a broader project aiming to develop, implement and assess the effectiveness of an integrated mental health prevention program for Portuguese facing employment adverse contexts.

**Methods:** We followed a consensus construction design, through a Delphi panel process. Experts were selected by intentional sampling, on basis of their expertise in: mental health promotion, public health, psychological/psychiatric care, social assistance and human resources management. The initial set of items submitted to appreciation was defined on basis of an in-depth narrative literature review in the area of mental health and mental health intervention associated with unemployment or temporary work. The Delphi panel was done in two rounds, with data collected through electronic forms. Level of agreement was expressed through a 5-point Likert scale. Consensus was defined as 90% of answers  $\geq 4,0$  (in 5-point scale) and an average higher than 3,5 (variation coefficient  $> 0,35$ ).

**Results:** From the 75 invited experts, 51 agreed to participate. The answer rate for the first round was 90%. Only respondents who answered the first round were invited to participate in the second one (second round answer rate: 100%). From the initial set of proposals, different intervention paradigms, models and techniques were consensual. Psychoeducation, mental health literacy and cognitive-behavior based tools/strategies were some of the most supported components for this type of intervention, targeting (a) reduction of mental health related stigma, (b) improving emotional self-awareness and coping strategies, (c) recognizing in others psychological suffering and knowing how to communicate effectively in such situations, and (d) reducing burnout. Experts consider mental health literacy gains, emotional self-awareness and job engagement (for workers) as key measures for assessing the intervention effectiveness.



Conclusion: The selected components of intervention are aligned with other community-based mental health promotion interventions. Their effects in terms of gains of mental health literacy and, ultimately, in terms of resilience to adversity still need to be assessed. If effective, this Delphi panel proposal may represent a reference for good practices in mental health intervention at community level.

### **O31: Employer Safety Obligations, Transformational Leadership and their Interactive Effects on Employee Safety Performance**

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It is well established in the literature that transformational leadership is an important antecedent of employee safety performance behavior in organizations, however, less is known about the role leadership plays in predicting safety performance when combined with other organizational safety influences. One organizational safety influence that has recently been identified as being important for understanding safety performance is perceived safety obligations within organizations, which are described as employee perceptions and beliefs about employer safety responsibilities that may be derived from societal and organizational influences. We examine the moderating effect of safety-specific transformational leadership on the relationship between perceived employer safety obligations and employee safety performance behavior and attitudes. Drawing on social exchange theory, and using data from a cross-sectional (N = 115) and a longitudinal (N = 140) sample of trade employees, we show that perceived employer safety obligations are positively associated with employee safety compliance, safety participation and attitudes. Safety-specific transformational leadership was positively and significantly associated with employee safety compliance, safety participation and safety attitudes. Leadership also acted as a moderator such that the relationships between perceived employer safety obligations and the safety outcomes (safety compliance, safety participation, safety attitudes) are stronger when safety-specific transformational leadership is high, as opposed to when low. We provide theoretical and practical implications stemming from this study and suggest directions for future research aimed at improving safety performance behavior and attitudes within organizations.

### **O32: Sustainable Management: Balancing Organizational Performance and Employee Well-being**

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Sustainability was defined as "Meeting the needs of the present generation without compromising the ability of future generations to meet their own needs." by the Brundtland Commission in 1987. While this definition was aimed at society in general the same must apply at a company level where a company meets the needs of the present without compromising the work life of current and future employees.

Indeed companies need to turn a profit, plan for business and ensure performance, but this in turn depends on the knowledge and competence of the employees. However, knowledge work is not always socially sustainable (Brödner, 2009) resulting in work-related stress. The risk of work-related stress and the high costs associated with it has generated a large number of preventive stress management intervention studies. However, most of the primary intervention studies focus, neither on the work and production system, nor are they concerned with the performance of the organization (Westgaard, Winkel 2011). The systematic review by

Westgaard and Winkel (2011) of organizational interventions states a need for studies on how work can be organized and managed in order to ensure both performance and well-being, which is termed sustainable production systems. The review also concludes that key factors of a sustainable production system, concern the managers and their management style. Defining sustainable management as the ability to balance organisational performance and employee well-being the question is then what characterizes a sustainable managerial practice which ensures a balance between performance and well-being.

With this paper we want to contribute to the field of sustainable management and the discussion of upstream management balancing employee well-being and organizational performance and how it can be organized and managed. It is our thesis that a well performing work place has a higher degree of sustainable management and differs in terms of employee well-being and management style. Based on longitudinal data we develop a model of sustainable management which incorporates employee wellbeing, effects from performance management systems and management behaviour. The application of the model will support the reduction of stress cases without impairment of the organizational performance.

### **O33: Job-Related Resources, Leader-Member Exchange and Emotional Exhaustion – A Longitudinal Study**

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Leadership as a health-related factor has increasingly become a focal point of interest in research. However, the mechanisms underlying this association are not yet well understood. In order to gain knowledge about the interplay between leadership and employee well-being, we investigated an integrative mediated model that combines job-related resources, leader-member exchange (LMX), and emotional exhaustion. Studies show that high-quality leader-member exchange (LMX) relationships are positively associated with employee well-being; however, the pathways for promoting this health-enhancing leadership have not yet been well explored. The primary objective of this study was to examine the effects of the interplay between job-related resources and LMX on employee well-being.

We applied a longitudinal paper-and-pencil design in a sample of 343 employees working in the German healthcare sector. By means of structural equation modeling, we showed that job-related resources (role clarity, meaningfulness and predictability) predict higher-quality LMX, which in turn relates to lower levels of emotional exhaustion. The results support the important role of job resources in stimulating health-relevant aspects of leadership. Our findings advance the understanding of how to enhance health-relevant leadership behavior and provide implications for the design of leadership-related interventions of workplace health promotion.

### **O34: Discrete Emotions Matter: The Role of Self-Assurance for the Relationship between Authentic Leadership and Organizational Citizenship Behavior**

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In this study, we investigate the mediating role of self-assurance (i.e., a discrete positive emotion) for the relationship between authentic leadership and organizational citizenship behavior (OCB) on a daily basis. Previous work has shown that positive emotions trigger



upward spirals in emotional well-being (Fredrickson, & Joiner, 2002) and that they are associated with health-related outcomes such as job satisfaction (e.g., Grandey, Tam, & Brauburger, 2002). Our study thereby contributes to a better understanding of how such factors can be enhanced to establish healthy workforces.

Building on affective events theory (AET; Weiss & Cropanzano, 1996) and in line with Hu and Kaplan (2015), we propose that specific discrete positive emotions rather than a general positive affect mediate the relationship between positively connoted leadership style such as authentic leadership and OCB. As a consequence, we hypothesize that authentic leadership is positively related to self-assurance, but not to the emotion joviality which reflects a broader, more general positive affective state. In turn, self-assurance should be positively related to OCB. Accordingly, we expect self-assurance, but not joviality, to mediate the relationship between authentic leadership and OCB.

To test our hypotheses, we conducted a daily diary study over the course of ten work days. A total of 94 full-time employees (64 per cent women) provided valid data on 377 days. Measurements were taken three times a day: in the morning (T1), after the lunch break (T2), and after work (T3). At T2 and T3 we measured authentic leadership and used the mean of both measurement occasions to assess daily authentic leadership, thereby reducing the retrospective bias. At T3, we measured the discrete emotions self-assurance and joviality as well as OCB. Because of our nested data structure (i.e., days nested in persons), we tested our hypotheses using a multilevel mediation model with Mplus, controlling for self-assurance and joviality in the morning.

Results of multi-level analyses support our hypotheses: Day-level authentic leadership was positively related to day-level self-assurance and day-level self-assurance, in turn, was positively related to day-level OCB. Furthermore, the relation between day-level authentic leadership and day-level OCB was mediated by day-level self-assurance. Yet, we found no significant relationships between day-level authentic leadership and day-level joviality or between day-level joviality and day-level OCB.

By showing differential roles of distinct positive emotions, our study enhances knowledge on the relationship between authentic leadership and OCB. The results show the importance of examining discrete positive emotions instead of a general positive affect (see Hu & Kaplan, 2015). Furthermore, as a practical implication, the results reveal the importance of strengthening authentic leadership at the workplace, because of its potential beneficial role for health-related outcomes such as self-assurance.

Future research should investigate boundary conditions for the relationship between authentic leadership and self-assurance and for the relationship between self-assurance and OCB. Furthermore, a broader range of leadership behaviors and affective reactions should be examined.

### **O35: Daily Transformational Leadership Qualifies the Impact of Daily Job Demands on Follower Work Engagement**

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Purpose: Most scholars adopt a between-person view of leadership, highlighting individual differences in leadership "styles". Yet, even inspiring, transformational leaders have "off-days" on which they have a bad mood or are not available for their followers. Adopting a within-

person approach of leadership, we examine the influence of leaders' daily transformational leadership behaviors on the relationship between daily job demands and employees' daily work engagement. We hypothesize that transformational leadership will foster employee work engagement on the days followers are confronted with high challenge demands, and that transformational leadership will protect work engagement on the days followers are confronted with high hindrance demands.

**Design/Methodology:** Two hundred and seventy-one elementary school teachers filled out an online questionnaire about their leaders' (school principals) behaviors, their own level of work engagement, and the perceived job demands at the end of each day for a period of ten days (i.e., daily diary study; number of data points = 2710). We used multilevel structural equation modeling in Mplus to test our proposed interactions.

**Results:** Two challenge demands, namely workload and cognitive demands did not affect teachers' feelings of work engagement on the days that the school principal showed few transformational leadership behaviors, whereas teachers were less engaged in their work when they experienced role conflict on these days. In contrast, when the principal showed many transformational leadership behaviors, teachers were more engaged in their work when they experienced a high workload and high cognitive demands. Moreover, as predicted, the principal's transformational behaviors buffered the negative impact of role conflict on teachers' work engagement. Thus, daily workload and cognitive demands acted as challenges only when employees were inspired by the leader; role conflict only acted as hindrance demand and undermined work engagement when daily transformational leadership was lacking.

**Research/Practical Implications:** Daily transformational leadership behaviors may be considered as important resources that turn daily demands into challenges and buffer against the detrimental impact of hindering demands on employees' work engagement. It thus seems especially important for leaders to use transformational leadership behaviors on the days that job demands are high.

**Originality/Value:** The present study is one of the few to adopt a within-person approach to leadership. Furthermore, as far as we know, this is the first study that examines how transformational leadership behaviors and job demands interact and consequently, impact follower work engagement.

### **O36: Digital Media Literacy Competence Acquisition (DMLCA) and Team Engagement in Teleworking (Virtual) Teams: A Theoretical Resource-enhancing Process Model based on the Input-Process-Output (IPO) Framework and the Conservation of Resources (COR) Theory**

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Two factors - the contemporary technological developments and the benefits of reducing costs for office-space - have been identified as key reasons for the increasing prevalence of teleworking and distance teamwork (Hertel, Geister, & Konradt, 2005). Knowledge and service-based companies that traditionally largely rely on teamwork are today the ones that are enthusiastically embracing teleworking practices as well. Not surprisingly, the combination of telework with teamwork practices implies a new way of working – virtual (i.e. referring to degree of virtuality) teamwork. Despite the prevalence of virtual teamwork, to date empirical research on virtual teams in general and on the relationship between (virtual) team processes and DMLCA, and well-being in specific is still very limited.

In this theoretical study, based on the input-process-output (IPO) framework of McGrath (1964) and the conservation of resources (COR) theory (Hobfoll, 2001), we propose a resources enhancing process model of DMLCA and team engagement in virtual teams. Specifically, we suggest that contextual factors such as team autonomy, and team perceived fairness of task and workload, as well as organisational support systems for DMLCA (team input) can enhance team explicit and implicit coordination, team trust and team self-efficacy (i.e. team process), which in turn would increase team knowledge sharing (as a part of the team process) and subsequently will result in enhanced DMLCA and team engagement (i.e. team outcomes). The study's team process model builds upon the main tenets of the COR theory. In essence, COR theory offers an explanation about the high correlations between resources by suggesting that resources tend to travel together in resource caravans. Moreover, the theory posits that both individual and organisational-level resources can enhance one's personal resources and promote well-being. While resources tend to aggregate at the individual level, they are expected to be even more common co-travelers for employees who work together and share the same organisational context (e.g. teams). Also, in line with the COR framework organisational resources can foster the resources of both individuals and sections or segments of workers by creating resource caravan passageways. Along these lines, in our theoretical model we hypothesise that the organisational and contextual resources (process input) will stimulate team level resources (team process) which in turn will result in increased positive team outcomes. The study's theoretical propositions are complemented with specific suggestions for research design (longitudinal survey-based) and data analyses (multi-level structural equation modelling).

The current paper has several theoretical implications. Besides addressing a highly prevalent, yet understudied phenomenon such as virtual teamwork in relation to DMLSD and team engagement. The study proposes a positive (resource-enhancing) processes model that explains dynamic team processes by combining insight from two seminal work psychology theories – IPO and COR framework. It also highlights the importance of more research attention regarding the development of resource gain spirals in teams in general, and virtual teamwork in specific.

### **O37: The Influence of Learning Climate on Human Sustainability at Work**

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An appropriate organisational context is essential for human sustainability at work. The objective of this study is to investigate if learning climate can enhance the components of human sustainability at work (vitality, workability, and employability of workers). Hypothesis: Learning climate enhances the components of human sustainability at work.

354 employees of the Open University in the Netherlands completed a questionnaire containing (amongst others) scales learning climate (Batram et al., 1993; time for learning scale, team support scale, and development opportunities scale) measuring health (used as a proxy-measure for assessing workability), flow (as a proxy-measure for vitality), and labour market position (for employability). Structural Equation Modelling was used to investigate the relationships.

Our study shows that learning climate enhances two components of human sustainability at work: vitality and employability. It does not appear to influence the work ability of the workers. The current study was a self-report study with a cross-sectional design. Further research is

needed to assess the relationships in a longitudinal design, including non-self-report data. Moreover, future research should investigate the relationships in other occupational settings. The implications of this study are that HRM can use developing HRM to enhance the human sustainability at work. The study shows that learning climate can be used to influence the human sustainability at work.

### **O38: Opening the Pandora's Box of the HRM- Well-Being Relationship: A Review and Research Agenda**

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Interest to date in establishing a positive relationship between HR practices and organisational performance has led to numerous attempts to uncover the mediating mechanisms through which HR practices impact organisational performance. Such attempts to 'unlock the black box' of HRM has led to the identification and consideration of employee well-being as an individual-level outcome of HRM practices. Although numerous studies to date have examined this relationship, a conflicting picture remains as to whether HR practices oriented toward performance improvements (e.g. high performance/high commitment/high involvement work systems) should be considered as facilitators (mutual gains perspective) or inhibitors (conflicting outcomes perspective) of employee well-being.

Using a systematic review of the literature examining HR and well-being, this paper aims to highlight the overlapping themes and discrepancies between such studies in terms of (1) the conceptualisation of both HR practices and well-being, and (2) the sequencing of variables in examining the 'black box'. For instance, there is considerable variation in the variables selected in extant research to represent well-being, ranging from general health to organisational commitment. Further issues arise where some researchers treat HR practices as precursors to job resources whereas others fuse them into one stage of the HR-well-being-performance model. The focus in this review is limited to quantitative studies that encompass the concepts of HRM and employee well-being since 2000. This starting point is justified for two reasons; firstly, our interest is focussed on contemporary workplaces and secondly, it coincides with the inception of the high performance work systems (HPWS) literature.

Further, in an attempt to reconcile the fields of HRM and occupational health psychology, the paper sets out a research agenda and complementary framework for future research to promote consistency in the conceptualisation and modelling of both HR practices and well-being. The establishment of such consensus would provide practitioners with clear and evidence-based recommendations relating to 'healthy' HR practices and considerations regarding HR practices which diminish/inhibit the quality of working life for employees.

### **O39: Development of the Career Management Questionnaire: Collaborative Design**

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The aim of the paper is to present existing steps in the development of the Career Management Questionnaire in the Czech Republic. Career Management have been considered as a way to promote more effective participation of the individual in the society and encourage social inclusion. Recently, as a reaction to the rapid changes at the labour market, there are efforts to support career management of citizens at the European level (Resolution of Educational Council, 2008; European Lifelong Guidance Policy Network). In the existing models (used in USA, Canada, Australia), career management is focused on personal management, lifelong learning and career (life/work) building. However, there are different approaches to the career management in different countries (Sultana, 2011).

Our research is focused on the concept of career management skills within the Czech context. Based on the review of the existing models and current literature, the career management skills will be developed and analysed from the local perspective by the Czech career guidance practitioners, employers, educators, as well as users themselves. The online questionnaire will be presented to the participants to give their voice about the relevance of specific career management skills. Moreover, the possibility to add new (not presented) skill will be added. Through this approach, specifics of the Czech educational system as well as central Europe labour market will be considered. First data of the survey will be presented at the conference.

The development of the Career Management Questionnaire is one of the results of the study. Questionnaire may be used by counsellors, lecturers, teachers, within the organisational settings, as well as by citizens themselves. The second aspect of the study is to widen the discussion about state of career management in the Czech Republic and involved different stakeholders. The study is part of the PhD project focused on the effectivity of career guidance.

#### **O40: The Vicious circle of Error Aversion Approach: The Role of Negative and Moral Emotions in Enhancing Organisational Errors**

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Recent literature on error management suggested that the way organizations cope with errors depends on the different approaches they may adopt, according to their prevailing cultural models (van Dyck al, 2005). In fact, in cultures adopting an error management approach, employees effectively manage the consequences of errors and appraise them as a learning opportunity. Conversely, in cultures adopting an error aversion approach, employees a) feel strained when they realize they've made a mistake and b) tend to cover or deny it, to blame who made the wrong action (Catino, 2008; van Dyck al, 2005). To the best of our knowledge, only few studies have investigated the aversion approach of the error culture (Bauer, 2008; Harteis al, 2008; van Dyck et al, 2005) and none of them have examined its relationship with negative emotions and errors (Zhao & Olivera, 2006, Zhao, 2011).

The aim of this research is to study the influence of error aversion dimensions (strain and covering up) on errors through the mediation of negative (e.g. irritation, worry, anxiety, frustration) and moral (e.g. embarrassment, guilt, shame) emotions. Results of a structural equation model on a sample of 351 employees (65% females, mean age 39 years SD=10) working in 79 teams of different organisations, attested that both error aversion dimensions (strain and covering) are associated with moral emotions, while only the strain dimension is associated with negative emotions; in turn, emotions are associated with errors. Overall, our results confirm the hypothesised relationship between error aversion approach and errors, as well the mediation role played by negative and moral emotions.

#### **O41: Perfectionism and Depressive Symptoms in Teaching: Moderating and Mediating Effects of Detachment**

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Personality traits, such as perfectionism, can predispose employees to depressive symptoms (Sherry, Richards, Sherry, & Stewart, 2014). Perfectionists may tend to have work-related perseverative cognitions during leisure time (Flaxman, Ménard, Bond, & Kinman, 2012), and compared to others, it can be more difficult for them to detach (i.e., disengage psychologically) from work. The aim of this study was to examine the associations between perfectionism, detachment, and depressive symptoms in teachers' occupational setting.

The participants were 76 Finnish primary school teachers (87% female) aged between 25 and 63 years. Perfectionism was measured with the Multidimensional Inventory on Perfectionism in Sports adapted for teachers (Stoeber & Rennert, 2008), which includes dimensions of striving for perfection (positive self-oriented perfectionism), negative reactions to imperfection (maladaptive self-oriented perfectionism), and perceived pressure to be perfect (i.e., perceived pressure from colleagues, students, and parents; socially prescribed perfectionism). Detachment was measured with the Recovery Experience Questionnaire (Sonnentag & Fritz, 2007) and depressive symptoms with the Beck Depression Inventory-II (BDI-II; Beck, Steer, & Brown, 1996). All analyses were adjusted for age, gender, and total working hours.

The results of linear regression analyses showed that striving to perfection and perceived pressure to be perfect were not associated with higher depressive symptoms ( $\beta$  ranging from .03 to .24,  $p$ -values  $> .05$ ) or with poor detachment ( $\beta$  ranging from -.12 to .13,  $p$ -values  $> .05$ ). However, negative reactions to imperfection were associated with both higher depressive symptoms ( $\beta = .41$ ,  $p < .001$ ) and poor detachment ( $\beta = -.25$ ,  $p = .050$ ). Bootstrap analyses indicated that poor detachment explained 16% of the association between negative reactions to imperfection and depressive symptoms ( $B_{\text{indirect}} = .06$ ,  $p < .05$ ). In addition, detachment moderated this association ( $\beta_{\text{interaction}} = -.27$ ,  $p = .011$ ). More specifically, high level of detachment appeared to have a protecting effect: the association between negative reactions to imperfection and depressive symptoms was not significant when detachment was high ( $\beta = .13$ ,  $p = .337$ ).

Our findings suggest that striving for perfection and perceived pressure to be perfect do not contribute to depressive symptoms in teaching, but negative reactions to imperfection and poor detachment may be predisposing factors. Finding ways to detach psychologically from work during leisure time is particularly important for teachers who are characterized by the maladaptive facet of self-oriented perfectionism.

## **O42: Personality and Secondary Trauma in Child Protection Professionals**

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Working with victims and perpetrators of child sexual abuse has been shown to cause secondary traumatic stress in child protection professionals. This study looked at the role of gender and personality on the development of secondary traumatic stress. The study involved 125 internet child abuse investigators (50 female and 75 male) from two UK police forces. The participants completed a personality test together with tests for anxiety, depression, burnout, compassion fatigue and traumatic stress.

The results showed that there was a greater risk of the incidence of secondary trauma in investigators who were female, introverted and neurotic. However, there were lower levels of symptoms in the participants in this study than had been found by other researchers looking at other professional groups.

The findings highlight the need to assess the suitability of new investigators and to provide regular screening and support as a means of reducing the incidence of secondary trauma. As the incidence of child sexual abuse increases there is a need to understand the mechanisms involved in the development of secondary trauma. There has been little research in this area; this paper highlights the level of risks involved.



### **O43: Interpersonal Conflicts and Daily Negative and Positive Affect: Exploring the Moderating Role of Neuroticism**

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**Purpose:** Drawing on affective events theory (Weiss & Cropanzano, 1996), and person-environment fit theory (French, Caplan, & Harrison, 1982), the present study investigates relationships between (a) daily interpersonal conflicts and (b) immediate and lagged negative and positive affective reactions. In addition, we examine how trait neuroticism may moderate these relationships.

**Design/Methodology:** In this quantitative diary study, 53 cadets (11.3 % females) participating in a sail ship cruise from northern Europe to North America, filled out a questionnaire on a daily basis over a period of 30 days. Prior to the voyage, participants also filled out a general questionnaire measuring relevant dispositional characteristics. In order to measure daily interpersonal conflicts, we applied a five-item checklist developed by Ilies et al. (2010). Daily positive and negative affect was measured by 12 items from an adapted version of the IWP Multi-Affect Indicator (Warr, 1990). Neuroticism was assessed with 12 items from the NEO Five-Factor Inventory (NEO-FFI, McCrae & Costa, 2004).

**Results:** Multilevel regression analyses (MLwiN 2.22.) revealed a significant positive relationship between interpersonal conflicts and negative affect within the same day ( $B = .193$ ,  $p < .001$ ), while no significant main effects were found between interpersonal conflicts and negative affect one and two days following the conflict. Furthermore, significant interaction effects between interpersonal conflicts and neuroticism were found in the prediction of negative affect the same day ( $B = .282$ ,  $p < .001$ ), the following day ( $B = .161$ ,  $p < .05$ ), and two days later ( $B = .181$ ,  $p < .05$ ), indicating a stronger and persisting reaction to the conflict among those of the cadets scoring high on neuroticism compared to those scoring low. In the prediction of positive affect, no significant immediate or lagged main effects were found. However, significant interactions between interpersonal conflicts and neuroticism in predicting positive affect were found within the same day ( $B = -.475$ ,  $p < .001$ ), as well as one day ( $B = -.391$ ,  $p < .05$ ) and two days later ( $B = -.383$ ,  $p < .05$ ). Closer inspection of these interactions indicate a negative relationship between interpersonal conflicts and positive affect among those scoring high (vs. low) on neuroticism. In contrast, the interactions predicting lagged effects indicated a small and persisting positive effect among those scoring low on neuroticism, while we found no significant relationships for those scoring high.

**Conclusion:** In line with affect events and person-environment fit theories, the findings of the present study indicate that daily interpersonal conflicts have a stronger and persisting negative impact on individuals who score high (vs. low) on neuroticism. Surprisingly, the findings also suggest that individuals low in neuroticism may even show a positive reaction on the days following an interpersonal conflict.

### **O44: Work Ability as a Risk Marker of Worker Health and Organisational Effectiveness: A Cross Sectional Study**

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**Background:** The Scandinavian approach to the assessment of work ability has been used in numerous countries by researchers and practitioners. However, there has been an over-representation of research on the influence of occupation and age on work ability; psychosocial aspects of work such as engagement, job satisfaction and stress have not been examined in

detail. More recently there has been a view that health certainly influences a person's ability to work and as a consequence focus has gradually shifted from stress and illness to social psychological processes that contribute to and enhance well-being. It is also proposed that for some jobs core self-evaluations may represent an ability factor due to the individual differences that a person brings to an organisation rather than factors influenced by the organisational work environment.

**Aims:** The purpose of this cross sectional investigation was to examine the extent to which work ability accounts for variance in a host of individual indices (psychological distress, job stress, job satisfaction) and organisational effectiveness indices (work engagement, sickness absence). A secondary aim is to examine the extent to which a broad personality construct – core self-evaluation – might account for additional variance in these indices over and above that accounted for by work ability.

**Method:** The study was conducted in four UK manufacturing organisations. Bivariate correlations and hierarchical linear regression analyses were applied to data contributed by a sample of 311 participants.

**Results:** Results indicated that the vast majority of explained variance in the dependent variables is attributed to work ability, though for each outcome (with the exception of sickness absence) a significant additional portion of the variance over and above that explained by work ability was accounted for by core self-evaluation.

**Conclusions:** This is the first study to have explored relations between work ability, core self-evaluation and individual and organisational effectiveness. The findings indicated that work ability and to a lesser extent core self-evaluation, are important influences on workers' health and organisational effectiveness thus contributing to the motivational aspects of the work ability construct.

#### **O45: Job Autonomy in the Relation to Work Engagement and Workaholism: The Mediation Role of Situational Motivation**

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The aim of the study was to identify the relationships between job autonomy, work engagement and workaholism. Building on the Self-Determination Theory and the Job Resources and Demands Model we hypothesised that job autonomy will be positively related to work engagement and negatively to workaholism. Moreover, we expected that intrinsic and identified motivation will mediate the relationship between job autonomy and work engagement and external motivation will mediate the relationship between job autonomy and workaholism.

The research design was cross sectional and used web-based questionnaires. Data were collected from a sample of 318 F&A company employees. The Utrecht Work Engagement Scale, the Workaholism Battery and the Work Design Questionnaire were used to measure study variables.

It was confirmed that the job resource (such as, autonomy) is positively related with work engagement and this relationship is mediated by intrinsic and identified motivations. The hypotheses about the negative relationship between job autonomy and workaholism and mediational role of extrinsic motivation in this relationship were not supported. The correlation between job autonomy and workaholism was marginally positive.



The results confirm that job autonomy is an important job characteristic that can be used to stimulate work engagement. Moreover, the study extends the understanding of how job autonomy comes to have its effects on work engagement through situational motivational states. Taking into account the results on workaholism, other work characteristics can play important role in explaining its contextual sources. This study gives rationale to enriching jobs in autonomy with the goal of enhancing work engagement in organisations.

#### **O46: Assessing Work-related Practices and Perceptions in the Context of Improving Occupational Health among Quarry Staff**

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**Introduction:** The use of enclosed cabs fitted with an in-cab filtration system is accepted increasingly as the norm for most vehicles used within the quarry industry. They are perceived to improve workers' comfort levels and to reduce exposure to dusts. Despite the use of such vehicles, there is limited research and information on the type of filtration system that would be the most efficient and effective for this industry, in terms of maintaining occupational health; as well as how workers uphold the effective functioning of these systems. This industry accounts for 50,000 employees, with 50% employed within small and medium-sized enterprises. It is useful therefore to explore the factors that drive the perceptions of this industry's workers on the usefulness and integrity of these systems, and to gain insight into how they are maintained, i.e., housekeeping and effectiveness.

**Method:** A qualitative design involved conducting mainly face to face interviews with 27 members of staff across three quarries. One participant was interviewed by telephone due to not being available during the visit. The participants comprised health and safety managers, drivers, supervisors, training managers, maintenance mechanics and procurement managers. A literature review provided insight into safe working practices in respect of cabs with filtration systems. It facilitated also the construction of the semi-structured topic guides, with questions to assess practices, knowledge, attitudes and perceptions along the life cycle process of a vehicle, defined as: design and manufacture, procurement, operations and maintenance. **Analysis:** Thematic analysis was used to facilitate the emergence of themes from the data.

**Results:** The literature review highlighted the limited human factors research undertaken in respect of in-cab filtration systems, especially within the quarry industry. The interview findings identified the inconsistencies in the types and levels of training that the workers received in respect of effective cleaning practices; the information disseminated on filtration systems, and how best to maintain the integrity of such systems; as well as the inadequate levels of knowledge of the purpose and value of such systems within the vehicles used in the quarry industry. Moreover, the workers had limited understanding of the consequences to health of these practices and behaviours.

**Discussion:** This research highlighted the awareness and willingness of workers in wanting to maintain effective working practices, but engaging inadvertently in actions that could affect adversely their health and overall well-being. As such, the provision of training and the sharing of information and good practices within the work environment can be considered not only as part of the developmental and compliance process, but rather as standard practices that support the overall occupational safety and health of the workforce. Although employers and employees work together to support safe work practices, these have to be consistently applied, monitored and amended when and where necessary.

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# **O47: Ethical Strain and Rumination in School Psychologists' Work: Individual Profiles and Associations with Weekly Well-being**

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The goal of this study is to bring new insight on a less investigated work demand, ethical dilemmas. Situations, where choosing the right action is unclear, can be a significant work stressor and thinking about these complex decisions can also spill over from work to home. School psychologists have a set of ethical guidelines that seek to guarantee the rights of both the client and the employee. However, they can still face situations where there is no single right way to act. Our first aim was to identify latent profiles based on school psychologists' experiences of ethical strain at work. The profiles were estimated using three dimensions: frequency of ethical dilemmas at work, stress caused by these dilemmas, and ruminating about the dilemmas during off-job time. Secondly, we investigated whether psychologists from different profiles differ from each other in terms of their weekly well-being (feelings of vigour, exhaustion and experienced sleep quality).

**Design and methods:** The questionnaire data was gathered from Finnish school psychologists (baseline general survey, N = 270) in 2014. In this study the sample consisted of 133 psychologists who participated also in a diary study including two weekly questionnaires for three weeks (online surveys were completed on Mondays and Fridays). The analyses were performed by using latent profile analysis (Mplus) and MANOVA (SPSS).

**Results:** Four groups were identified: High Ruminators (20% of the psychologists), Low Ruminators (39%), an Intermediate Group (39%), and Atypical Outliers (3%). The last group was left out from further analyses because of the small group size and missing data regarding the outcome variables. Low ruminators experienced the lowest level of stress and rumination caused by ethical dilemmas, although they reported facing dilemmas as often as the psychologists in the Intermediate group. High Ruminators had the highest frequency of facing ethical dilemmas and they ruminated about the dilemmas most often, but their self-ratings about feelings of stress were at the same level as in the Intermediate Group. High Ruminators represented the least beneficial group in terms of well-being. They experienced the lowest levels of weekly vigour, the highest levels of weekly exhaustion and reported the lowest sleep quality after each work week compared to the other groups.

**Limitations:** This study is based on data gathered via self-reports.

**Implications:** Ethical dilemmas at work can represent a risk for well-being especially when employees feel that the dilemmas stay on their mind also during non-work time. Somewhat surprisingly this kind of ethical ruminating separated the groups more clearly than the experiences of stress, and was further associated with well-being outcomes.

**Value:** This study contributes to understanding how employees differ in their experiences of ethical dilemmas at work, and especially about the role of ruminating. If employees face ethical dilemmas at work, it can lead to ruminative thinking (thoughts revolving around the dilemma) and therefore hinder employees' ability to mentally "switch off" after work. This can lead to impaired well-being. The results are applicable to helping employees acknowledge how mentally detaching from the ethical demands at work is important for their well-being.

#### **O48: The Interactive Effects of Stressful Life Events and Attachment Insecurity on Employees' Work Outcomes and Health Symptoms**

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In this study we examined the hypotheses that stressful life events predict negative work outcomes and health symptoms, and that attachment security moderates these relationships. Although there is evidence that stressful life events have harmful effects on people's well-being and functioning (e.g., Luhmann, Hofmann, Eid, & Lucas, 2012), research provides limited evidence and understanding of its overall impact on work outcomes. Building on attachment theory (Bowlby, 1973, 1980, 1982), we developed and tested a model of the direct and moderating effects of attachment insecurity on the relationship between stressful life events and job-satisfaction, job-performance, and health symptoms. In this study we controlled for negative affectivity as well as for possible confounding demographic effects including participants' gender, education, age and income. Data collected from 871 full-time employees and analysed using structural equation modelling largely supported the moderated model. That is, higher attachment anxiety and avoidance predicted lower job satisfaction, lower job performance and more health symptoms. Stressful life events (measured with the Social Readjustment Rating Scale - SRRS; Holmes & Rahe, 1967) predicted lower job satisfaction, lower job performance and more health symptoms. Furthermore, the relationships between stressful life events and job-satisfaction, job-performance and health symptoms were attenuated as attachment anxiety decreased. Overall the findings support the predictions of attachment theory and suggest that attachment security buffers the harmful effects of stressful life events.

#### **O49: Occupational Health in High-Performance Work Systems: Direct, Mediated, and Interactive Effects of High-Commitment and High-Involvement Management on Work Ability**

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This study contributes an occupational health perspective to current research on High-Performance Work Systems (HPWS). Defining for HPWS are configurations or "bundles" of human resource practices that develop synergistic effects on workers and organizational outcomes. Technology-centred and incentive-based approaches aside, High-Commitment Management (HCM) and High-Involvement Management (HIM) are advocated as employee-oriented strategies for implementing HPWS. Numerous studies have confirmed links between components of HPWS and indicators of productivity and economic performance. Less is known on the implications for worker health and well-being.

Based on a large-scale questionnaire study, this research investigated mediated, direct, and interactive Effects of HCM and HIM on the work ability of public employees. The sample consisted of N = 14.372 civil servants, employed by a German city in the areas of general administration, technical services, schools and childcare, healthcare and social services. Four, partly competing hypotheses, derived from the interdisciplinary HPWS literature (labelled involvement-, inducement-, investment-, and intensification-hypothesis) were tested using structural equation modelling. Measures for HCM and HIM, the independent variables, and Positive Job Attitudes (PJA), included as a mediating psychological state, were extracted from a commercial employee survey instrument. HCM practices, conceptualized as employer investments in supportive working conditions, were operationalized with six items on organizational standards regarding occupational safety and health, pay and benefits, and equipment and working environment. HIM practices were also measured with six items, tapping

employee participation in decision-making, delegation of responsibility, and goal setting. PJA comprised another six items on employee motivation, dedication, and perceived job significance. The work ability index (WAI) was used to measure the occupational health outcome of perceived capacity to fulfil one's job. The seven WAI dimensions exhibited a two-factorial structure (subjective estimate and health status).

Results provided support for all four hypotheses and associated perspectives. In accordance with the involvement-hypothesis, emphasizing intrinsic work motivation, PJA mediated a positive effect of HIM on estimated work ability. Confirming the inducement-hypothesis, highlighting extrinsic motivation, PJA also mediated a positive indirect relationship of HCM and estimated work ability. The investment-hypothesis was supported by positive direct effects of HCM on both WAI factors. Evidence for the more controversial intensification-hypothesis, adopted from a labour process theory perspective on HPWS, was found in the form of negative direct effects of HIM on both WAI dimensions. Corroborating this ambivalent role, the interactive effect of HCM and HIM was positive for PJA, but negative for work ability.

Capitalizing on a large sample and robust results, this study integrated competing views on HPWS by investigating rarely tested assumptions on the effects of HCM and HIM on employee attitudes and occupational health. Supporting critical assessments of the HPWS paradigm, results confirmed an ambiguous dual role of HIM in stimulating worker motivation and simultaneously demanding intensified utilization of their work capacity. Consistent improvements in work ability can be expected from HCM strategies of investing in decent work and employment conditions. Employee-oriented routes to HPWS need to combine HCM and HIM components, such that resourceful and supportive work contexts compensate or balance escalating performance requirements.

### **O50: Association of Observer-Assessed Working Conditions With Depressive Symptoms Among Female Eldercare Workers**

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**Objectives:** Eldercare workers in Denmark have a higher prevalence of poor psychological health than other occupational groups. Research has shown that this may be caused by the working conditions within care work. To date most research on the association between working conditions and depressive symptoms has relied on self-report. Self-reported working conditions make the results vulnerable to problems of reporting bias, i.e. that depressive symptoms cause workers to overestimate the adversity of their working conditions. To avoid this bias, we assessed working conditions by using trained observers. These observers rated the working conditions and consequently the working condition measurements were independent of the individual workers' depressive symptoms.

**Methods:** We examined the association between externally assessed working conditions and self-reported depressive symptoms among female eldercare workers from 10 care homes in Denmark. Working conditions were observed based on action regulation theory and defined as a) regulation requirements, a workplace resource providing opportunity for decision making and skill development, and b) barriers for task completion. We examined the associations of individual and work unit averaged working conditions with depressive symptoms in a sample of 95 individually observed eldercare workers. Further, we examined the association of work unit averaged working conditions with depressive symptoms in a sample of 205 care workers,

including both observed and non-observed individuals. We used regression models that allowed for correlations within work units and care homes and adjusted these models for demographics (age and cohabitation), job characteristics (job group, shift, working hours) and stressful life events.

Results: Higher levels of regulation requirements were associated with lower depressive symptoms at the individual level ( $p=0.04$ ), but not at the workplace level. Barriers were not associated with depressive symptoms at the individual level. At the workplace level, a higher number of qualitatively different barriers ( $p=0.04$ ) and a higher number of barriers for equipment use ( $p=0.03$ ) were associated with lower levels of depressive symptoms in the age- and cohabitation adjusted model, however statistical significance was lost in the fully adjusted model.

Conclusions: The study showed that a high level of regulation requirements on the individual level, assessed independently of the care workers' own appraisal, was associated with fewer depressive symptoms. Creating work organisations where care workers can make decisions, be creative in their work practices and develop their skills may be important for care workers' mental health.

### **O51: Why do General Practitioners Self-Diagnose and Self-Prescribe Drugs?**

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Objective: Physicians tend to demonstrate inappropriate behavior when it comes to taking care of their own health. Self-prescribing or self-treatment seems to be practiced in many countries, and self-treated illnesses are found to be more common among general practitioners. For the physician such behavior is a threat to their own health, and as a consequence their patients might not be able to receive optimal health care. The purpose of this study is to examine the relationship between help seeking behavior, sickness presenteeism, exhaustion, and self-treatment among general practitioners.

Method: This cross-sectional study was conducted in 2013 among GPs employed in one City Council in Sweden using a questionnaire on health and work factors. The criterion variable "To self-diagnose and self-treat" was measured with a single item from the Physician Career Path Questionnaire (PCPQ; Fridner, 2004). Exhaustion was measured with a scale from the Oldenburg Burnout Inventory, OLBI ( $\alpha = .82$ ; Demerouti et al., 2001, 2003). "Sickness presenteeism" and "Taking vacation due to stress" was measured with single items, also from the PCPQ (Fridner, 2004). For the analyses, we used hierarchical multiple regression.

Results: Altogether 193 (63,9%) female GPs and 109 (36,1%) male GPs answered the questionnaire, a 44% response-rate. Among them 46,2% stated they had diagnosed and treated themselves for a condition for which they would have referred a patient to a specialist. Our regression analysis model revealed that those physicians who self-treated themselves were also significantly more sickness present at work. Adding to this, exhaustion among the GPs was also included in the model.

Conclusions: This study shows that self-treatment is not an isolated behavior, but occurs together with exhaustion and sickness presenteeism, indicating a quite severe situation for their health, which would need to be investigated by other doctors than themselves. This needs to be further investigated and taken into account by the National Board of Health and Welfare, County Councils and Medical Associations, and for future physicians our medical schools.

## **O52: Exploring Possible Predictors and Consequences of Embitterment in the Workplace**

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This study examined the association between embitterment at work, organisational injustice and work-related rumination. Embitterment is the emotion of feeling constantly disappointed, insulted and having a desire for revenge. It is triggered by an event that is perceived and experienced as unjust, as a personal insult and psychologically as a violation of basic beliefs. The workplace might be an arena of experiences of injustice and unfairness, however there is a lack of studies that have examined embitterment within the workplace. This study aimed at exploring possible predictors and consequences of embitterment in the workplace.

It was hypothesized that all four conceptualizations of organisational injustice (procedural, distributive, informational and interpersonal) would positively predict embitterment. It was also hypothesized that embitterment would be associated with all three conceptualizations of work-related rumination (affective rumination, problem-solving pondering, and detachment). Specifically, embitterment would be positively related to affective rumination and problem-solving pondering and negatively related with detachment. In total 337 employees completed an online questionnaire. Among the participants 45.7 % scored above 2.5 on the embitterment scale - indicating a clinically significant intensity of reactive embitterment.

Correlation analysis revealed that the relationship among embitterment, and the conceptualizations of organisational injustice and work-related rumination, were all significant and in the direction predicted. Four multiple regression models were completed in order to test which variables were significant predictors. In the first model, organisational injustice concepts were entered as predictors, with embitterment as a dependent variable. Procedural, informational and interpersonal injustice significantly predicted embitterment, with procedural injustice being the strongest predictor,  $\beta = .263$ ,  $p < .001$ . The remaining three regression models used embitterment as a predictor variable and affective rumination, problem-solving pondering and detachment as dependent variables respectively. Embitterment contributed significantly to the prediction of increased affective rumination  $\beta = .669$ ,  $p < .001$  and problem-solving pondering  $\beta = .223$ ,  $p < .001$ . Embitterment also significantly predicted a reduction in detachment  $\beta = -.423$ ,  $p < .001$ .

Findings suggest that, with the exception of distributive injustice, the remaining organisational injustice concepts do predict embitterment. Employees' perceptions of how fair the organisational procedures are used to allocate outcomes, how sensitive and fair the information is communicated to the employee and how explanatory is the information given to employees explaining why a specific outcome happened, might impact significantly the prediction of embitterment. Regarding the consequences of embitterment, it appears that feeling embittered may prevent employees from adequately recovering from work. As findings suggest, being embittered does predict increased affective rumination and decreased detachment. However, the fact that embitterment predicted increased problem-solving pondering might imply that embittered employees do consider problematic work issues, such as organisational injustice and try to find solutions to them when not at work. This study is one of the first to investigate predictors and consequences of embitterment in the work context and has led to additional insight into the psychological manifestations of embitterment.



### **O53: Alcohol as the Problem or Alcohol as the Solution? The Cyclical Nature of Workplace Injuries, Alcohol Use and Employee Mental Health**

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In much of the research that looks at workplace accidents and injuries, alcohol is considered to be a predictor variable. People who drink alcohol, especially those who are heavy drinkers, are more likely to be injured at work. Yet there is also evidence that alcohol consumption is an outcome of workplace injuries. People who are injured at work experience physical issues as well as mental issues including depression, anxiety and in some cases post-traumatic stress disorder. Consuming alcohol has been shown to be a coping mechanism used by people to deal with negative feelings, which could be caused from both physical pain and mental pain. Thus, if drinking alcohol leads to an increased chance of injury, and being injured leads to increased alcohol consumption, this suggests a cyclical interaction. In this study we test for this cyclical interaction using data from several consecutive cycles of lagged data from the Canadian National Population Health Survey. We measure alcohol use, workplace injuries, and worker mental health (depression and anxiety) in a large-scale, nationally representative sample over five different periods covering a span of ten years. Our study adds to the existing knowledge of workplace safety and employee well-being by showing that alcohol is both a predictor and an outcome of workplace injuries, as mediated by employee mental health.

### **O54: The Role of Personality Traits in the Association between Job Characteristics and Depression**

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**Introduction:** Adverse job characteristics have been linked with increased incidence of depression in general working populations. However, the association between job characteristics and depression in an older working population while controlling for personality traits is less well known.

**Method:** A sample of  $n=1025$  male and female workers aged 50-69 years were recruited from a primary healthcare clinic in Southern Ireland. Job characteristics were measured using the Copenhagen Psychosocial Questionnaire, specifically scales relating to demands (quantitative and cognitive) and resources (influence at work and possibility for development). Each of the four scales comprised of four items, with a theoretical range when summed of 0-100. Personality traits were measured using the Ten-Item Personality Inventory (TIPI) which consisted of five traits: extraversion, agreeableness, conscientiousness, emotional stability and openness to experiences (each trait ranged 1-14). Depression was measured using the Centre for Epidemiological Depression Scale which comprised of 20 items (possible range of 0-60). Participants who had a prior diagnosis of depression were eliminated from the analysis leaving a sample of  $n=887$ . Descriptive analysis, bivariate correlations and linear regression analysis was conducted.

**Results:** Just over half the sample was male  $n=476$  (54%) and the mean age was 57.9 (4.9) years. Bivariate correlations showed depression scores to be significantly correlated with all five personality traits and all job characteristics except cognitive demands. Depression was positively correlated with quantitative demands ( $r=0.2$ ) but negatively correlated with resources at work and personality traits (correlations ranged from  $r=-0.12$  to  $r=-0.37$ ). Hierarchical regression analysis was conducted with age, sex and education in step 1, personality traits included in step 2 and job characteristics in step 3. Only sex was an influential predictor of depression in step 1. Personality traits when entered in step 2 explained an additional 19% of the variance in depression with age, sex and education controlled for. Job characteristics only explained a further 3% of the variance when entered into step 3. Only age,

education, openness to new experiences and possibility for development were non-significant in the model. The strongest significant predictors in the model were emotional stability ( $\beta=-0.28$ ) and quantitative demands ( $\beta=0.13$ ). Only quantitative ( $\beta=0.04$ , SE 0.01) and cognitive ( $\beta=0.03$ , SE 0.01) demands had significantly positive impacts on depression (higher levels of demand higher depression scores) with higher influence at work negatively impacting on depression scores ( $\beta=-0.02$ , SE 0.01).

Discussion: Personality traits are important to consider when examining the association between job characteristics and depression. Our findings indicate that despite sex, age and personality traits higher demands and lower influence at work impact the workers mental health negatively. Quantitative demands have the greatest impact. Initiatives should be introduced in the workplace to reduce the demands particularly those related to work intensity and distribution of work tasks.

### **O55: The Perceived Similarities and Differences between Physical and Psychological Health and Safety**

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Background: Organisations are aware of the importance of occupational health and safety, from both a physical and psychological sense, in preventing harm or injury to employees and promoting optimal functioning and organisational performance. Identifying the underlying factors that lead to the deterioration of individuals' psychological health at work and how to sustain psychological health and safety in the workplace has increasingly been of interest to academics and practitioners alike. A measure of psychological health and safety via the Psychosocial Safety Climate (PSC) developed by Dollard (2007) goes some way in helping to clarify psychological safety in the workplace. However, the present authors contend that the distinction between physical and psychological safety is insufficiently developed and needs further exploration to ensure construct validity in measurement.

Aim: To qualitatively examine how employees perceive health and safety in the workplace with specific emphasis on understanding the perceived similarities and differences between physical and psychological health and safety.

Method: Purposive snowball sampling via social media (Facebook, LinkedIn) was used to recruit participants from a range of industries and occupations to ensure a variety of perceptions. Ninety two employees completed a qualitative survey consisting of open ended questions that gauged perceptions of health and safety in the workplace and explored the similarities and differences between physical and psychological health and safety at work.

Results: Content and thematic analyses were used to analyse the data. It was found that participants generally differentiated between the physical and psychological aspects of safety in terms of definitions and perceptions of how health and safety is practiced in the workplace. Some of the themes were similar to the previously identified principles underlying the PSC, such as management priority (or rather the lack of priority given to psychological health and safety) and organisational participation and involvement (in terms of promoting mental health and wellbeing). New themes also emerged, such as employee vulnerability and the covert nature of psychological health and safety.

Discussion: The findings have implications for how psychological health and safety is assessed and addressed in the workplace. Recommendations are made for future research to assist in developing policies, procedures, and practices to ultimately influence both physical and psychological health and safety at work.



## **O56: Empowering Employees to Job Craft: How and When Empowering Leadership Relates to Job Performance?**

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Job crafting is a proactive employee behavior and represents a bottom-up job redesign process in which employees themselves make changes to optimize job characteristics. After customizing the job to fit their own needs and preferences, employees should generally feel engaged at work and thus job performance is expected to be improved.

Proactive behavior such as job crafting usually is not part of a given job description and thus not tied to formal systems of rewards and penalty. As such, leader behaviors should serve as critical signals of whether or not proactive behavior is welcomed at work. Empowering leadership, particularly granting job autonomy and delegating power to employees, has been suggested as an important facilitator of employee proactivity. To the best of our knowledge, however, no empirical studies have examined the relationship between empowering leadership and job crafting in particular.

Integrating empowering leadership and job crafting theory, we investigate the underlying processes of the relationship between empowering leadership and employees' job performance. Three-wave data were collected from a sample of 236 Chinese employees. We obtained job performance data from company records (i.e., key performance indicator, KPI). The results from Structural Equation Modeling (SEM) showed that expansion-oriented job crafting (i.e., seeking resources and challenges), but not contraction-oriented job crafting (i.e., reducing demands) fully mediated the effect of empowering leadership on job performance. Moreover, the tests of moderators (i.e., power distance and task interdependence) revealed that empowering leadership was more strongly related to expansion-oriented job crafting when employees' power distance was high, and more strongly related to contraction-oriented job crafting when task interdependence was low.

It seems that empowering leadership is more effective for employees with high (vs. low) power distance to expand their jobs by increasing more resources and challenges. And these expansion-oriented job crafting behaviors in turn is related to enhanced job performance. Moreover, when tasks are low (vs. high) in interdependence, empowered employees are more likely to reduce the hindering aspects of their jobs.

## **O57: Contextual Factors of Job Boredom: Examining the Mediated Cross-level Relationships between Servant Leadership Climate and Job Boredom via Job Crafting**

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Job boredom is a passive state of employee ill-being that is associated with numerous negative consequences on employees and organizations (see Loukidou et al., 2009 for a review). For example, a recent study found an association between job boredom and employee self-rated health, stress symptoms, increased turnover and early retirement intentions (Harju, Hakanen and Schaufeli, 2014). Thus, creating an environment where employees are less likely to become bored in their jobs, should be of interest to all organizations.

Job boredom is typically associated with lack of both job resources and challenging job demands (e.g. Reijseger et al., 2013). Accumulating research evidence suggests that employees may craft their jobs to increase those resources and challenges that foster their own motivation and well-being at work (Tims, 2010; Vogt et al, 2015). Although job crafting is undertaken by employees' own initiative, Wrzesniewski and Dutton (2001) emphasize that leadership's role is essential in creating an environment where employees perceive opportunities for crafting their job. This study focuses on servant leadership as a specific leadership style that is expected to cultivate job crafting behaviours by prioritizing success of the followers, empowering individuals and providing them with the resources they need to excel in their work (Dierendonck, 2011).

Often studied as an individual level phenomenon, little is known of job boredom that resides in work units and the contextual factors that are associated with it. This study examines servant leadership climate as a unit contextual factor that encourages employees to actively craft more motivating and thus, less boring, jobs for themselves. Although servant leadership climate has been associated with positive individual level outcomes (e.g. Walumbwa, Hartnell and Oke, 2010), to our knowledge there are no studies on its relationship on job boredom or on job crafting in work units. Moreover, despite literature linking job crafting with job boredom (van Hooff and van Hooft, 2015), contextual evidence of the associations of employee-initiated proactive behaviours on job boredom at the level of work units are lacking.

To examine our main hypothesis of servant leadership climate having a negative cross-level association with job boredom via job crafting, we employed a sample of 276 employees clustered in 54 teams in various organizations. Results of random coefficient modelling supported the hypothesis of servant leadership climate having a negative cross-level association with job boredom and that job crafting mediated the relationship. The analyses and results will be discussed in further detail in the presentation.

This study has both theoretical and practical implications regarding servant leadership climate as a unit contextual factor in active well-being of employees. The findings suggest that servant leadership climate may cultivate job crafting behaviours that are associated with less job boredom, and thereby to a more motivated workforce.

### **O58: Occupational Self-Efficacy as a Mediator of the Relationship between Positive Emotions and Job Crafting: A Three-Wave Study among ICT Users**

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**Objectives:** The aim of the study was to examine the role of positive emotions as predictors of employees' job crafting and to investigate the role of occupational self-efficacy as a potential mediator of this relationship. Some of the predictors of job crafting have been investigated in earlier studies. Yet, none of the predicting models included positive emotions. This study aims to fill this gap. The hypothesis that positive emotions predict job crafting is consistent with Fredrickson's (2001) broaden-and-build theory of positive emotions. She also posits that positive emotions build personal resources. Studies on social cognitive theory has shown that experiencing positive emotional states increases self-efficacy, one of the personal resources determining human behaviours (Bandura, 2001). Self-efficacy is positively related to proactive behaviours, such as job crafting (Tims, Bakker, & Derks, 2013). To confirm these long-term adaptive benefits of broadening thought-action repertoires triggered by positive emotions we propose occupational self-efficacy as a potential mediator between positive emotions and job crafting.

**Methods:** Three-wave longitudinal data were collected from 170 employees that use information and communication technology (ICT) at their daily work. Participants completed online survey to measure positive emotions, job crafting, occupational self-efficacy, and work-related stressors.

**Results:** Mediation analysis with bootstrapping using PROCESS macro for SPSS (Hayes, 2012) indicated that controlling for work-related stressors (T1): (a) there was a direct effect of positive emotions (T1) on job crafting (T3), and (b) occupational self-efficacy (T2) mediated the relationship between positive emotions (T1) and job crafting (T3).

**Conclusions:** The study contributes to the knowledge what variables and mechanisms could be involved in a process responsible for development and enhancement of job crafting. The study informs practitioners that occupational self-efficacy should be targeted in intervention programs designed to job crafting enhancement.

### **O59: Proactive Personality and Well-Being: The Mediating Role of Job Crafting and Career Competencies**

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During the last decades, jobs have become increasingly more complex due to the globalisation of economies and advanced technologies. In addition, the current labour market has become increasingly competitive as a result of the financial crisis and rising unemployment rates. By taking initiative and being adaptable, employees themselves are able to influence important individual work outcomes and cope with the fast paced changes in the organizational environment. Proactive personality seems to be an important asset for employees nowadays to realize their work- and career-related goals. The aim of this research was to examine the link between proactive personality and employee well-being. Moreover, to gain a better understanding of this relationship, we explored the role of two mediators from different, but highly related fields - job design and careers -. As such, we aimed to contribute to a more integrated approach of job design and career studies by examining how employees can proactively optimise their well-being through both a work- and a career-related measure. More specifically, we investigated whether the relationship between proactive personality and well-being (i.e., job satisfaction and perceived health) is mediated by proactive job crafting behaviors and career competencies. Based on the Job Demands-Resources model, we expected proactive employees to engage in job crafting by adjusting their job demands and resources such that more job satisfaction and a better health are accomplished. Additionally, we hypothesised that proactive personality would be related to the development of career competencies (i.e., the knowledge, skills, and abilities central to career development), which in turn would be related to well-being. Data was collected among 574 employees working in various organizations. The results of structural equation modelling analyses offered support for the proposed model. Employees with a proactive personality were more likely to experience satisfaction in their work when they engaged in job crafting. In addition, both employee's job satisfaction and perceived health improved through the development of career competencies. These findings suggest that employees can proactively enhance their well-being through both proactive job design and the development of career-related skills and abilities. Therefore, it would make sense for organisations to combine HR policies related to job redesign with training and development to optimise employee well-being.

## **O60: Exploring the Relationship between Job Crafting and Work Engagement from a Cross-Cultural Perspective: Comparing Italy and The Netherlands**

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Employee job crafting receives a lot of interest in occupational health psychology. The aim of this paper is to examine job crafting from a cross-cultural perspective. Job crafting refers to the self-initiated changes that employees make in the boundaries of their tasks, relationships, and cognitions (Wrzesniewski & Dutton, 2001). Recently, job crafting has been operationalised by four dimensions (Tims, Bakker, & Derks, 2012): increasing structural job resources (e.g., autonomy and variety), increasing social job resources (e.g., social support and feedback), increasing challenging job demands (e.g., new projects), and decreasing hindering job demands (e.g., reducing cognitive demands). Previous research suggests that (expansion-oriented) job crafting is positively related to work engagement, as proactively changing or optimising one's work environment is likely to increase levels of vigour, dedication, and absorption at work (Tims et al., 2012).

Despite the recognized role of cultural values and norms in influencing behaviour, research examining the role of culture on job crafting outcomes is lacking. This study examines whether there are differences in the relationship between job crafting and work engagement in two European countries that are characterized by similar levels of individualism but by different levels of power distance and in-group collectivism, namely Italy and The Netherlands. Drawing on self-construal theory stating that people have certain ideas about their relationships to others (Singelis, 1994), we expect that the relationship between job crafting behaviours involving employees' own initiative only (i.e., increasing structural resources, increasing challenging demands, and decreasing hindering demands) and work engagement is similar for people living in individualistic countries. However, to engage in job crafting by increasing social job resources one needs to consult colleagues or a supervisor. In countries characterized by high in-group collectivism and high power distance (e.g., Italy), proactively seeking support, coaching and feedback from colleagues is less likely to occur because people are unlikely to go to figures of authority and tend to interact only in-group compared to countries with low in-group collectivism and low power distance (e.g., the Netherlands). When employees in high in-group collectivism and power distance countries overcome these social barriers, we expect they may benefit more from these job social resources than employees who generally have more access to these resources (i.e., positive interaction effect of country).

We first validated the job crafting scale in an Italian (N=439) and Dutch (N=331) sample and then tested whether country moderated the relationship between job crafting dimensions and work engagement. Confirmatory factor analyses in both samples supported the fit of the four-factor structure of the job crafting scale. Moderation results showed that the relationship between job crafting behaviours involving employee's own initiative only and work engagement didn't differ in both individualistic countries. However, the relationship between increasing social job resources and work engagement was indeed stronger when in-group collectivism and power distance were higher (i.e., Italy) compared to low in-group collectivism and power distance (i.e., The Netherlands). Possible explanations and implications are discussed.

## **O61: Risk Aggression and Work-related Stress**

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Violence in the workplace is a concern in health care. The National Institute of Occupational Safety and Health (NIOSH) defines violence in the workplace "any physical assault, threatening behaviour or verbal abuse that occurs in the workplace". It is defined as aggression, physical violence against another person and physical assault in the workplace. When subjectively quantified, they can be considered indicators of work-related stress. Acts of violence against health professionals by patients/users are sentinel events that require putting in place appropriate prevention and protection initiatives. Bearing in mind that it takes only one event to determine the risk, it is appropriate for informational and educational purposes to conduct a risk assessment of operational units and of homogeneous groups of workers that are exposed to the same type of risk with reference to the job and gender, to partition the organizational and operational specialization and work. From 2009 to 2013, a study was carried out in a Sicilian University Hospital to analyse the accident reporting physical assault on homogeneous groups of workers, with reference to Unit of belonging, the homogeneous groups of workers who have been identified applied the above methodology. The homogeneous groups of workers who were part of this study were: doctors, nurses and auxiliary. Following the methodology and guidelines of INAIL, has been called the factor of Gravity (G) Injury from aggression by calculating, for each homogeneous group, (nurses, doctors, auxiliary) the relationship: between sick days and number events injury. Each homogeneous group. Therefore it has the right factor of gravity G. For each Group Homogeneous. It proceeds to evaluate also the factor Probability (P) given by the percentage of daily working time spent in contact with the user. The analysis of quantitative and qualitative injuries from physical assault revealed a numerical increase was evident during five years. However the outcome and prognosis of these injuries remained constant resulting in contusion / sprain of average size with an initial prognosis between 7 and 10 days.

Among the operational units, the highest number of injuries reported was aggression, affecting Medicine Acceptance and Urgency. The task group most affected is that of nurses. It is noted gender equality. To conclude, our survey shows that in the assessment of risk from physical assault the workplace and contact with the 'user-assisted play basic roles'. It is important, therefore, the type of workplace and the presence of dangerous objects. For activities considered high risk-aggression is suggested to elaborate and adopt a program training of risk prevention by facilitating the coordination with the Police and others subjects who can provide valuable support to identify strategies to eliminate or mitigate physical violence, sentinel event indicator risk work-related stress in hospitals.

## **O62: Predicting the Effectiveness of Work-focused Treatment of Common Mental Disorders: The Influence of Baseline Self-efficacy, Depression and Anxiety**

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Purpose: Work-focused CBT, compared with regular CBT, has been found to promote return to work among employees who are sick-listed due to common mental disorders (Lagerveld, Blonk, Brenninkmeijer, Wijngaards-de Meij, & Schaufeli, 2012). The current study addressed the role of baseline work-related self-efficacy, depressive complaints and anxiety on treatment outcomes of these two CBT-based interventions.

**Design/Methodology:** In a quasi-experimental design, 12-month follow-up data of 168 employees were collected. Participants either received treatment as usual consisting of cognitive behavioral therapy (CBT,  $n = 79$ ) or work-focused CBT (W-CBT) that integrated work aspects early into the treatment ( $n = 89$ ).

**Results:** As expected, individuals with high baseline levels of self-efficacy benefitted more from W-CBT in terms of full RTW. No effects were found of baseline depressive complaints or anxiety. Effects on mental health complaints will be explored using multilevel analyses.

**Limitations:** Unfortunately, we were not able to randomize individual clients across conditions.

**Research/Practical Implications:** This study revealed the influence of baseline self-efficacy on treatment outcomes of a work-focused CBT-based intervention. This insight may help practitioners identify clients who are most likely to benefit from this type of intervention.

**Originality/Value:** Our study contributed to the scarce knowledge on RTW interventions for employees who are absent due to common mental disorders.

### **O63: Take a Time Out and Recover!: A Study on Physical and Cognitive Recovery Experiences, Sleep and Well-being**

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Previous research has consistently recognised the importance of recovery during leisure time ('off-job') in relation to employee health, well-being and performance. Recovery experiences such as psychological detachment, relaxation, active leisure, positive affective states, and behavioural control all facilitate off-job recovery (Geurts, 2014; Sonnentag & Fritz, 2007). The role of these recovery experiences has not yet been investigated within the sport domain, in which the role of recovery is also regarded as vital in preserving athletic health and well-being, and to increase performance (Kellmann, 2002). Using the Demand-Induced Strain Compensation Recovery (DISC-R) Model (De Jonge & Dormann, 2003; de Jonge et al., 2012) as a theoretical framework, we hypothesized that recovery experiences (sleep, cognitive detachment and physical relaxation) would be negatively associated with physical well-being (injury) and positively associated with cognitive well-being (mental energy) outcomes in a sample of recreational athletes.

A cross-sectional survey was administered to 161 recreational athletes (96 males, 65 females,  $\text{Mage} = 27.1$ ,  $\text{SD} = 13.6$ ) from a variety of sports. The athletes, on average, engaged in sport for 5.3 hours a week ( $\text{SD} = 3.4$ ). Constructs were measured using several scales and subscales of the Recovery-Stress Questionnaire (RESTQ; Kellmann & Kallus, 2001). Age, gender and average number of hours per week were included as control variables.

Results from structural equation modelling showed that physical recovery was not related to injury nor mental energy, whereas cognitive detachment was negatively related to injury ( $\beta = -.21$ ) and positively related to mental energy ( $\beta = .30$ ). Furthermore, physical recovery was positively associated with sleep quality ( $\beta = .30$ ), and negatively associated with sleep deprivation ( $\beta = -.19$ ). Cognitive detachment was also related to sleep quality ( $\beta = .22$ ) and sleep deprivation ( $\beta = -.27$ ) in a similar fashion. In addition, sleep deprivation partially mediated the effect of cognitive detachment ( $\beta = .08$ ,  $z = 2.35$ ,  $p = .019$ , 95% CI = .02 - .13) on mental energy.



Our findings provide preliminary evidence that temporarily leaving one's sport behind in a cognitive manner can have a positive effect on sleep and well-being of athletes; whereas physical recovery only affected sleep, but not well-being. Therefore, our study underlines the important role of cognitive detachment in the recovery process. To our knowledge, this is the first study to explicitly investigate the role of cognitive detachment in relation to well-being among a sample of athletes, using a validated questionnaire. The present study thus provides new and promising insights into the role of cognitive detachment as an effective recovery experience in relation to sleep and athletic well-being. Future studies focusing on the role of off-job recovery experiences such as cognitive detachment, but also other recovery experiences such as control and mastery, with regard to athletic well-being are warranted.

#### **O64: Stress in the Workplace: The Case Study of Cyprus**

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The current study examined occupational stress, by administering the Occupational Stress Indicator (OSI) (Cooper, Sloan & William, 1989) to 75 employees in administrative positions, working in the public and private sectors in Cyprus. Its purpose was to identify how groups of individuals cope with stress in the workplace; how they manage pressure in the job, what effects stress may have on their mental and physical health and its effects on their general behavior, relaxation patterns and their smoking and drinking habits.

Additionally, in examining work stressors, eight personal interviews were carried out. From the results it could be concluded that: 'control over the job', 'time out' and 'conflict resolution via communication', play an important role in the way individuals cope with stress at work.

Furthermore, the results identified among other factors, that 'pressure in the job' is a very important source of stress as it is directly related with factors like 'work overload', 'job insecurity', 'lack of management support' and 'discriminatory culture'.

Concerning t-test differences by gender and personality types (A and B), men type 'A' were shown to experience higher levels of stress than women, while women presented higher levels of stress related to 'pressure in the job', 'work overload' and 'support from outside'.

Furthermore, younger employees, (less than 37 years old), experienced more stress when communicating with others and they also appeared to feel the office discriminatory culture more intensely than older people. Of equal importance is the fact that differences exist between public and private sectors in the area of 'communication', 'confidence' and 'lack of self-confidence'. Job security that exists in the public sector makes employees less anxious to communicate with others.

Additionally, for those who smoke (31%, of the respondents), the findings suggest that the increased need for 'communication' has a positive correlation with increasing the number of cigarettes one smokes per day; the same effect has 'time out' for smokers as they increase the consumption of cigarettes. This research, also reconfirms the fact that habit of smoking deteriorates health, increasing at the same time body symptoms of stress.

Nonetheless, 'job insecurity' and the 'support' from a person's social environment both appeared to have a negative correlation with smoking habits.

An interesting finding regarding the habit of drinking is that in Cyprus the consumption of alcohol is not of great importance to individuals; no correlations either at the 0.01, or at the 0.05 level of significance were found; an encouraging assumption which denotes that Cypriot employees still keep some good habits in their lives and do not resort to alcohol to solve their working problems.

Lastly a group of synthetic factors which examined physical health and body symptoms of stress encountered, showed that in Cyprus employees on average have not reached the level at which their body health has been affected by occupational stress and according to the study, employees using exercise as a means for relaxation showed lower levels of stress and were able to manage stress better.

### **O65: The Interaction of Job Resources and Organizational Identification in Predicting Employee's Well-being**

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The idea that job resources lead to increased well-being became increasingly popular among researchers. In fact, in organizational settings, several empirical studies have evidenced that when people perceive higher levels of job resources they report increased levels of well-being. However, the present work questions this assumption. Is job resources' impact on well-being always positive? Are job resources always resourceful? In fact, based on the Conservation of Resources Theory (Hobfoll, 1989; 2002), we propose that employees' perception of job resources and their level of organizational identification (OI) interact in predicting employees' well-being; in that when OI is higher, job resources will play a more significant role in predicting well-being. In order to test this general hypothesis, we performed 3 studies based on cross-sectional surveys applied to the employees of 3 different organizational settings: lawyers (N=106), cleaning employees (N= 145) and employees from an aviation firm (N= 72, in a two wave study). In these 3 studies we analysed the interaction of organizational identification and different job resources (perceived organizational support (study 1), interactional justice (study 2), and psychological empowerment (study 3) in the prediction of important aspects of employees' well-being: work engagement (study 1), life satisfaction (study 2), and pleasant affect at work and sleep quality (study 3). Results are largely consistent across the three samples and show that the benefit of these job resources for employees' well-being is contingent on the degree of their perceived oneness with the organization. In other words, the relationship between these job resources and employees' well-being is moderated by OI, so that these job resources only have positive impact on employees' well-being when OI is high. These results speak to the added value of integrating organizational identification in understanding the impact of job resources on employees' well-being. Implications and suggestions for future studies on the relationship between job resources and well-being are discussed.

### **O66: Examining Incivility and Burnout in Nursing: The Protective Role of Self-Efficacy**

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Purpose: High personal and organizational costs of workplace incivility must be addressed to promote retention of nurses and to sustain effective health care. The purpose of this study was to test a model linking occupational coping self-efficacy (OCSE) to nurses' experiences of workplace incivility from co-workers, physicians, and immediate supervisors, burnout, and ultimately perceptions of personal and organizational wellbeing in Canadian nursing settings.



**Design/Methodology:** A cross-sectional national survey of hospital nurses in Canada (n=1410) was used to test our theoretical model. Structural equation modelling (SEM) with MPLUS 6.0 was used to analyze the model.

**Results:** SEM results revealed an excellent fit for the hypothesized model:  $\chi^2(1008) = 3541.170$ ,  $p < .01$ , CFI = .93, RMSEA = .042 (CI = .041, .044),  $p = 1.00$ , SRMR = .049. OCSE was negatively related to the perception of incivility in the workplace. Furthermore OCSE was significantly and negatively related to levels of emotional exhaustion (-.17) and cynicism (-.11). Similarly, OCSE was also negatively related to mental health (-.22). Unexpectedly, OCSE was not significantly related to job turnover intention. Incivility was significantly related to the emotional exhaustion (.50) and cynicism (.19) burnout dimensions. In line with the burnout theory emotional exhaustion was related to cynicism (.61), so that the higher the emotional exhaustion the higher the cynicism experienced in relation to the job. Emotional exhaustion and cynicism were significantly related to mental health (.40 and .37 respectively). Although cynicism was significant related to job turnover (.52), emotional exhaustion was not, contrary to our hypotheses. Overall the model explained the 69% of general health and the 33% of job turnover. OCSE had significant indirect effects on mental health and job turnover intentions through incivility and burnout. Specifically, SE influenced poor mental health through incivility and the emotional exhaustion and cynicism components of burnout (total indirect effects:  $\beta = -.26$ ; 95%CI = -.31, -.21). On the other hand, SE influenced turnover intentions through incivility and cynicism (total indirect effects:  $\beta = -.21$ ; 95%CI = -.25, -.17). Results also showed that emotional exhaustion influenced turnover intentions indirectly through cynicism (total indirect effects:  $\beta = .32$  95%CI = .26, .38).

**Limitations:** The cross-sectional design precludes attribution of causal effects and the use of self-report measures raises concerns about common method variance.

**Research/Practical Implications:** Results showed that OCSE may play a protective role against negative workplace experiences (incivility and burnout) and may foster positive personal and workplace wellbeing. These results are encouraging because SE is a modifiable intrapersonal resource that can be supported and promoted by proactive management.

### **O67: Like a Bamboo or a Stone? Influence of Resilience and Hardiness on Teacher Subjective Well-Being**

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Teaching can be a very stressful job and has a high risk of stress-related health problems (Skinner & Beers, 2014). Taking the perspective of positive psychology, identifying factors that influence teachers' well-being might also have positive impacts on their health. According to the conservation of resources theory (Hobfoll, 1989) or the job demands-resources model (Demerouti, Bakker, Nachreiner & Schaufeli, 2001), individual resources are central for subjective well-being. One of the resources discussed and examined in this context is resilience, which can be defined as positive adaptation in the face of adversities. Related but distinct to resilience (Pagnallo, Zibarras, Lewis & Flaxman, 2014) is the concept of hardiness that "encompasses attitudes that provide the courage and motivation to turn difficult situations into growth opportunities" (Alfred, Hammer & Good, 2014, p. 95). Whereas resilience often represents a reaction to adverse events (bouncing back), hardiness considers active coping in the face of adversities. As both have an impact on well-being, we examined which concept is more strongly related to teachers' subjective well-being.

The invitation to participate in an online survey was sent out to several German schools. The final sample consisted of 1,841 German teachers (70% female; age in years:  $M = 41.2$ ,  $SD = 11.97$ ; work experience in years:  $M = 13.27$ ,  $SD = 11.96$ ; 67% worked fulltime). Resilience was measured using the Brief Resilience Scale (Smith, Dalen, Wiggins, Tooley, Christopher, & Bernard, 2008), hardiness was assessed with the Occupational Hardiness Questionnaire (Moreno-Jiménez, Rodríguez-Muñoz, Hernández, & Blanco, 2014). Well-being was composed of positive affect, negative affect, life satisfaction and job satisfaction. Furthermore, we assessed demands (stressful pupil behaviour) as well as emotional support.

Resilience and hardiness showed only small intercorrelations ( $r = .20$ ,  $p < .01$ ) and showed moderate relations with teacher subjective well-being (resilience:  $r = .31$ ,  $p < .01$ ; hardiness:  $r = .42$ ,  $p < .01$ ). Bootstrapped multiple regressions showed that, when controlling for emotional support and stressful pupil behaviour, hardiness was a better predictor for subjective well-being ( $\beta = .345$ ,  $p < .01$ ) than resilience ( $\beta = .167$ ,  $p < .01$ ). Additional analyses that examined the differential effects of the three facets of hardiness revealed that this effect was mainly based on the strong influence of commitment ( $\beta = .397$ ,  $p < .01$ ), whereas challenge ( $\beta = .051$ ,  $p = .03$ ) and control ( $\beta = -.039$ ,  $p = .06$ ) had only negligible impacts on well-being.

We conclude that hardiness and especially its facet commitment are related to teacher well-being. As "commitment is the ability to believe in the truth, importance and interest value of who one is and what one is doing; and thereby, the tendency to involve oneself fully in many situations of life" (Kobasa, 1988, p. 101), meaning of work is a possible candidate to mediate this relation.

#### **O68: Coping with Negative Acts at Work: Organizational Citizenship Behaviour as Impression Management**

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Prior research into bullying at work has found, intuitively, that individuals experiencing bullying tend to report negative outcomes. However, a small body of research has found that bullied individuals sometimes report higher levels of performance. These findings have been referred to as 'intriguing' and 'unexplained'. In this study, we propose that organisational citizenship behaviours (OCB), as a form of contextual performance, may help explain this. It could be argued that OCBs are used as a form of impression management employed to 'look good' rather than actually 'do good'. As such, OCBs could be used in compensation to the negative acts, to avoid poor social relationships at work in the hope that the bullying will stop. Therefore, those that see themselves as being victims of bullying can be expected to also report that they undertake more OCBs.

Data were compiled from four cross-sectional studies in Vietnam, Philippines, Thailand and Cambodia (total  $N = 3217$ ). Respondents were recruited from key industry sectors; Manufacturing, Education, Hospitality and Healthcare. Bullying was measured in two ways. Firstly, through the frequency that individuals reported experiencing 22 negative acts at work. Latent class cluster analysis placed respondents in five clusters according to this experience; not bullied, sometimes bullied, frequently bullied, victims of bullying, and work-related bullied. Secondly, a single item measured respondents' explicit beliefs about whether or not they were bullied based on a stated definition. OCB was conceptualized in terms of the intended target or beneficiary of the citizenship behaviour; OCB towards the individual (OCB-I) and towards the organization (OCB-O). We examined the relationships between self-labelled bullying, frequency and type of negative acts and OCB outcomes.

Individuals who were victims of persistent negative acts or those who experienced work-related negative acts reported the highest levels of OCB-I, but no significant difference in OCB-O from those less frequently bullied. Broadly, this would support our suggestion that individuals might use OCB-I as a form of impression management to stop people from bullying them, whereas perhaps OCB-O is perceived to be more about performance and less about personal relationships, so not an effective counter-measure. Some between-country differences were also found in individuals levels of OCB-I in response to being bullied indicating cultural variation in how individuals employ OCB-I, perhaps linked to saving face. Implications for future research are discussed.

### **O69: Experienced Burnout Level and its Relationship with Resilience among Health Care Staff**

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This study explored the relationship between resilience and burnout among professional caregivers of elderly people in Hungary. A representative sample of professional health care staff (n = 161) including registered nurses, and personal support workers completed a self-report questionnaire measuring demographic factors, work related information, resilience (RS-25, five-point Likert scale version, Wagnild and Young, 1993) and burnout (MBI, Maslach and Jackson, 1981).

Burnout has been defined in many ways but its causes are work related stressors, which lead to emotional exhaustion, cynicism, reduced efficacy (personal accomplishment) and negative attitude toward work. Work stress and the symptoms of burnout are frequently studied issues among those who work in the health care system. In fact, they are defined as high risk populations to experience burnout.

This study represents an additional effort to shed light on this phenomenon and is guided by a model of stress and coping. Specifically, why are some resistant to symptoms of burnout and what is the role of resilience when workers face frequent stressors at work. Resilience has been defined by Wagnild and Young (1993) as "a positive personality characteristic that enhances adaptation." Based on previous research, we hypothesized that resilience would significantly mitigate burnout.

In our sample, the subscales of emotional exhaustion (18.25±8.62) and depersonalization (5.13±4.1) were in the moderate range and scores on personal accomplishment (26.93±5.15) were associated with higher levels of burnout. No significant associations were found between demographic variables, work related factors (e.g., gender, age, marital status, education, number of children, shiftwork, income rate), resilience and burnout. However, being divorced, parenting a greater number of children, and low income increased burnout scores.

The mean resilience score for this population was 92.06 (±8.56) which is situated in the moderate range. We found a significant (p<0.000) correlation between the overall resilience score and personal accomplishment such that resilient participants were more satisfied with their accomplishments on the job. Results underline the importance of perceived competence, effectiveness and achievement in preventing burnout.

## **O70: Factors Influencing Problem Solving in a Nation-Wide Sample of 3.668 Greek Educators.**

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**Introduction:** Dealing with stressors and difficult situations in the workplace, or even in everyday life, requires personal resources like problem solving skills. Problem solving has been defined as a cognitive-affective-behavioral process for dealing with demands or challenges. The presented study's aim was to detect associations between teachers' problem solving skills and individual and work-related characteristics, in a nation-wide sample of pre-primary, primary and secondary educators, by the use of the Problem Solving Inventory (PSI).

**Methods:** During the spring of 2014, educators of all levels and specialties were asked to voluntarily complete an online questionnaire in a cross-sectional study, information on which was posted on the official and the main teachers' portals in Greece. The questionnaire included items on demographic, personal, and job characteristics and the PSI. Data were collected by 3668 of pre-primary, primary and secondary teachers who completed the questionnaire. Multiple linear regression was used to investigate possible associations of study variables with PSI.

**Results:** Sample consisted of 1030 male and 2638 female teachers with mean age 43.4 (SD=8.7) years. The mean score for "Problem Solving Confidence" was 51.6 (SD=7.8), 73.5 (SD=11.8) for "Approach-Avoidance Style", 20.4 (SD=5.1) for "Personal Control" and 145.5 (SD=21.7) for Total PSI score. Multiple linear regression analysis showed that women had lower scores on "Problem Solving Confidence" and "Personal Control" subscales, and on total PSI score, compared with men. Age was negatively correlated with "Problem Solving Confidence" and "Approach-Avoidance Style" subscales and with total PSI score. Teachers with higher education had greater scores on all PSI subscales and teachers with full time jobs had lower scores on "Problem Solving Confidence" and "Approach-Avoidance Style" subscales, and on Total PSI score in comparison to those with part time jobs. Larger number of students in the classroom was associated with greater scores on total PSI score and on "Personal Control" subscale, while support from colleagues was associated with better levels of "Personal Control". Additionally, educators that had attended training on Social Emotional Skills and Mental Health Promotion programs had higher scores on "Approach-Avoidance Style" subscale and on Total PSI score.

**Conclusion:** Problem solving skills are of critical importance for dealing with difficulties in work and in everyday life. It seems that training on social-emotional skills during teachers' undergraduate studies or post-studies seminars, would result in enhancement of their coping and problem solving skills, thus contribute significantly in their mental health.

## **O71: ASSET Pulse: Investigating the Utility of a Short Stress Measure**

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**Introduction:** Stress measurement tools are used by and useful to organisations. However, some tools do not measure both stressors and health, whereas others measure both but have more items, are longer and more time consuming. There is a need for a short measure of workplace stress that organisations can use to take a 'snap shot' of prevailing workplace conditions and related health outcomes. Such a measure would be practically useful for managers and organisations. The aim of this paper is to investigate the validity of such a short stress measure (ASSET Pulse) derived from the original ASSET stress tool (Fargher et al. 2004).

**Method:** Data was collected from 39,342 employees who completed ASSET anonymously in 48 different organizations. Eight ASSET stressor scales assess work pressures. The goal of developing ASSET Pulse was to reduce the number of items in the overall ASSET questionnaire whilst minimizing impact on questionnaire validity. Analysis involved iteratively checking correlations between the full scale and reduced scale until the best combination of reduction in length and validity was obtained. This process resulted in seven ASSET Pulse job pressure scales: Work relationships (one item); Balanced workload (two items); Job security (two items); Control (one item); Resources and communications (two items); Aspects of the job (one item); Pay and benefits (one item).

**Results:** A cross-validation approach randomly splitting the sample into two subsamples was used. Confirmatory factor analysis: Replicating the dimensionality of ASSET, we tested a factor structure with three latent factors (i.e., balanced workload, job security changes, resources & communication) and four manifest variables (work relationships, job control, aspects of job and pay & benefits). Results showed that this model had better fit compared to alternative models. Thus, ASSET Pulse preserves the workplace stressor content-domains of ASSET. We also tested a total stressor scale by fitting a higher-order model which also showed good fit.

**Convergent-validity:** The total ASSET Pulse and ASSET scales were highly correlated at  $r = .95$ ,  $p < .001$ , suggesting substantial overlapping variance between the two versions. Moreover, ASSET Pulse subscales were most strongly correlated with their corresponding subscale in ASSET offering further support for convergent validity.

**Criterion-validity:** ASSET Pulse and ASSET scales have similarly strong relationships with physical and psychological health and explain similar amounts of variance for the two health outcomes. As expected, higher perceptions of workplace stressors were associated with higher levels of psychological and physical ill-health.

**Discussion:** We conclude good fit for (1) ASSET Pulse factors (2) ASSET Pulse total stressor scale. Using ASSET Pulse will allow the identification of negative health impacts to the same degree as ASSET. This short stress measurement tool offers benefits for practice and researchers due to: quicker completion times; potentially higher response rates; and cheaper costs. Furthermore, a short measure is easier to use at multiple time points, thus likely improving longitudinal data collection and the evaluation of interventions. This should serve to build a stronger knowledge base of intervention effectiveness, acknowledged as limited with regard to existing evidence.

## **O72: An Adjectival Approach in Measuring Wellbeing at the Workplace**

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Important constructs in the domain of occupational health psychology, both antecedents (e.g. job characteristics) and outcomes (e.g. engagement, burnout etc.) are traditionally envisioned as having a strong emotional component. Still, they are traditionally measured with statements which emphasize their cognitive components. Adjectival approaches to measuring emotion in the workplace have been hinted at by Russell's (2003) mood/core affect circumplex and Warr et al.'s (2013) affective circumplex, but have never been robustly put to the test. The present paper tackles this gap in the literature by proposing an adjective-based approach to the measurement of antecedents and outcomes of wellbeing in the workplace, as prescribed by the Job Demands-Resources (JD-R) model.

A number of constructs in the JD-R model (antecedents and outcomes in the domain of occupational wellbeing) have been measured with both classical statements and adjectives on a convenience sample of N=119 participants. The psychometric qualities of the adjective-based measures are investigated (reliability, construct, convergent and divergent validity) and this approach is contrasted with the statement-based classical approach. The adjective-based approach is found to be acceptable both in psychometric qualities and model fit with the predictions of the JD-R model.

Similar to the measurement tradition in personality research (Goldberg, 1992), we propose adjectival markers for the various emotions at work. By using multidimensional scaling techniques, we also propose an empirically-based circumplex model which differs in grouping and underlying structure from Warr et al.'s (2013) affective circumplex and Russell's (2003) mood/core affect circumplex.

### **O73: The Assessment of the Risks Related to Stress at Work Through Objective and Observational Risk Indicators: A Study on the INAIL's Checklist.**

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**Introduction:** In the past few years much progress has been made in European Union in recognizing the importance of the work-related stress risk and in adopting specific tools to assess such type of risk. The Italian Workers' Compensation Authority (INAIL) developed a methodology for the assessment of work related-stress risk as an integrated management risk approach comprising a checklist for measuring objective and observational risk indicators for a preliminary assessment phase. A first test of the checklist was conducted on 800 Italian companies by asking for feedback on the clarity and full understanding of the items, completeness of the information required, and feasibility in compiling it. After 5 years from its development further investigations are needed to confirm the effectiveness of this tool, also in consideration of the high number of companies using the INAIL's methodology. This study aimed to investigate the psychometric characteristics of the check-list, to better specify the scoring mechanism and to provide a better contextualization of the tool in terms of company's size and economic sectors.

**Methods:** A sample of about 6,300 homogenous groups of workers, namely those identified by the employer on the basis of similar characteristics (shift work, job position, type of contract ecc.) which identify specific and common risk factors for employees, was considered nested within about 1,900 Italian companies. The checklist under investigation helps companies in identifying indicators of work-related stress risk under three main headings: (1) sentinel events (e.g. absenteeism rates, staff turnover, accidents at work); (2) work content factors (e.g. workload, working hours, working environment); (3) work context factors (e.g. interpersonal relations, work/home interface). Different exploratory and confirmatory factor analyses were conducted both within and across the areas related to the work content and work context factors. Considering the complex nature of the dataset (with homogenous groups nested within companies) specific estimation methods were used within the framework of Mplus software.

**Findings:** Homogenous groups of workers included in the analyses belong mainly to the following economic sector: 21.2% other services activities, 17.1% manufacturing, 13.1% professional, scientific and technical activities, 9.2% constructions, 7.5% Human health and social work activities. As regard to the companies' size, the bigger the company the higher the



level of risk resulted from the checklist. Over 80% of companies with more than 250 employees reported a medium or high risk for work-related stress, whereas around 60% of companies from 1 to 9 employees resulted in a low risk. Findings allowed to define the psychometric characteristics of the check-list, to better specify the scoring mechanism, and improve this tool.

Discussion: This study offered useful information for the contextualisation and adaptability to specific occupational features and needs as well as to companies' characteristics to take account of their sector and size in the assessment of work-related stress risk. This study improved scientifically the role of the assessment of objective and observational risk indicators using factors linked to work-related stress from international literature. Such findings are also important for a possible adaptation and validation of the checklist at international level.

#### **O74: When Effects are Confounded, They Cannot be Interpreted: A Study of Confounding in Assessment Centre Ratings**

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Background: Dimensions (e.g., communication skills, health awareness) measured through multifaceted measures hold a key position across a vast array of disciplines relevant to health and organisations. However, the measurement properties of dimensions have long been affected by confounds. The outcome of confounding in the context of multifaceted measurement is that the extent to which reliable variance in ratings reflects dimensions is difficult or impossible to establish. Nowhere have dimensions been scrutinized more closely than in the literature on assessment centres (ACs). In recent years, dimensions have enjoyed a revival in the AC literature and now feature as important, meaningful, and impactful variables of interest in a range of different studies published in leading journals (e.g., *Journal of Applied Psychology*, *Personnel Psychology*). However, none of these studies have fully accounted for confounding. As a consequence, the extent to which the effects found in these studies are attributable to dimensions, or to a multitude of other variables relevant to ACs, is unclear. This issue has implications for any context in which the aim is to measure dimensions using multiple samples of behaviour.

Study Aim: Our aim is to disentangle the different effects in AC ratings in order to establish what role dimensions have in AC ratings as distinct from other effects in AC ratings (i.e. different samples, rating items, assessors, and exercises). Doing so would work towards informing the discipline about the "real" basis for AC ratings and, more widely, about the role of dimensions in multifaceted measures.

Method: Ratings were collected from an operational AC used in a public institution. The AC under study was developed according to international guidelines. Data were subjected to a Bayesian random effects analysis.

Results: Results suggested that when confounding is (properly) taken into account, AC ratings have little to do with dimensions. The lion's share of variance in AC ratings is accounted for by (a) a general performance factor and (b) exercise-related effects.

Discussion: The findings of the current study call into question the interpretation of much of the "dimension revival" literature on ACs and the role of dimensions in organization-related studies. They suggest that if dimensions are the intended focus for assessment in ACs, an AC does not allow sufficient high fidelity behavioural sampling for such variables to manifest. In the light of these findings, we call for an alternative direction for AC research and practice.

### **O75: Relational Job Characteristics and Context-free Wellbeing: The Mediating Role of Work Engagement and Burnout among Portuguese and Brazilian Hospital Nurses**

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This study investigates the mediating role of work-related wellbeing in the associations between relational job characteristics and the context-free wellbeing of hospital nurses. Previous research has shown that work engagement and burnout mediate the relationships between job characteristics and employee wellbeing. However, relational job characteristics have not been studied or examined in terms of work engagement, burnout and context-free wellbeing in the nursing profession.

The psychological effects of relational job characteristics include perceived impact on clients, affective commitment to clients and perceived social worth whilst we studied their relationships with work-related wellbeing and context-free wellbeing in this research project. We hypothesised that the psychological effects of relational job characteristics would report significant relationships with work wellbeing: positive with work engagement and negative concerning burnout. We also forecast that work-related wellbeing would fully mediate the relationship between these relational job characteristics' psychological effects and hospital nurse context-free wellbeing.

The data for this correlational study were collected by an online survey from a sample of 620 hospital nurses in Portugal and Brazil (N=335 and N=285, respectively). Measures included Portuguese translations of the Relational Job Characteristics' Psychological Effects Scale, the Utrecht Work Engagement Scale, the Maslach Burnout Inventory, the Satisfaction With Life Scale and the Perceived Health Scale.

Our hypotheses were partially supported. Data analysis returned a full mediation model in which perceived social worth explained context-free wellbeing through the hospital nurse work-related wellbeing and in both samples. Furthermore, in the Portuguese sample, the relationship between the affective commitment to clients with nurses' context-free wellbeing was fully mediated by work-related wellbeing.

Perceived social worth may contribute to hospital nurse work-related wellbeing, which, in turn, contributes to their context-free wellbeing in both the Portuguese and Brazilian samples. In the Portuguese sample, the affective commitment to clients may impact on hospital nurse work-related wellbeing that, in turn, affects their context-free wellbeing.

### **O76: All You Need Is ...? A Diary Study on Differential Relationships between Job Resources and Basic Needs Satisfaction in the Prediction of State Work Engagement**

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This diary study aims to contribute to knowledge on the emergence of state work engagement by taking a closer look at the motivational path linking job resources with work engagement (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001). In pursuit of this goal, I examined satisfaction of the three basic needs for autonomy, relatedness, and competence (Deci & Ryan, 2000) as day-level mediators of the relationships between daily job resources and state work engagement. Based on the ideas inherent to the match principle (e.g., de Jonge & Dormann, 2003), I hypothesized that different resources satisfy different basic needs and, hence,



contribute to work engagement via different motivational paths. Specifically, I hypothesized that (1) daily job control is positively related to state work engagement mainly via the satisfaction of the need for autonomy, that (2) daily social support is positively related to state work engagement mainly via the satisfaction of the need for relatedness, and that (3) daily role clarity is positively related to state work engagement mainly via the satisfaction of the need for competence.

I tested the hypotheses with a daily diary study in which 197 participants answered two daily surveys for a total of 662 workdays. Participants rated their daily job resources and need satisfaction at noon of each workday (relating to the morning at work) and their state work engagement at the end of each workday. All Cronbach's alphas were satisfying and multilevel confirmatory factor analyses showed that the three job resources and the three need satisfactions represent distinct constructs.

Results of multilevel structural equation modelling using Mplus showed that, within persons (i.e. at the day level), the three job resources were each most highly related to the satisfaction of their matching need, although job control was also related to satisfaction of the need for competence. However, only satisfaction of the needs for autonomy and competence were related to state work engagement. Mediation analyses revealed the following significant indirect effects: Daily role clarity was related to state work engagement via satisfaction of the need for competence. Moreover, job control was related to work engagement via satisfaction of both the need for autonomy and the need for competence.

Because I measured job resources and need satisfaction at the same point in time using a single source, these results should be interpreted with caution. Nevertheless the results suggest that, in order to enhance employees' work engagement on a daily basis, the needs for competence and autonomy should be addressed. To do so, organisations should provide job resources that satisfy these needs. Future research should extend the present study by including other job resources and other outcomes.

### **O77: Performance Perceptions About Leadership and Relationships at Work: Can They Serve as Buffers for Burnout on Academics?**

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Human resource management system (HRMS) is an organizational dimension which sends common messages to employees (Bowen & Ostroff, 2004). This research intends to demonstrate the relevance of human resource management systems in the employees' health. The paper follows a process-approach, specifically based on the relevance of implementation processes on human resource management, and its relationship to health measures.

The study was developed in an understudied population, academics and researchers. Universities often do not pay special attention to their human resource management systems. Through this quantitative study we intend to explore the relationship between, human resource management department perceived performance and academics trust on their leadership, with stress and burnout.

A survey was responded by 145 academics from 4 public and private universities. Results bring interesting results and show a negative association between trust and perceived performance from human resource management departments, and burnout.

The study main limitation is the reduced sample, however non parametric tests and a power analysis was developed. These results are relevant theoretically and practically. This study reveals the importance of trust in leadership in a very demanding career as the academic. Also, it acknowledges the relevance of the perceived performance of human resource managers in the decreasing of the burnout index in this population.

Both results are new and enable the development of organizational intervention programs that can produce more active and competent human resource managers able to work actively with academics, helping in burnout decreasing symptoms.

### **O78: Extending the Job Demands-Resources Model of Work Engagement: The Role of Demands and Resources from Other Domains**

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This study aims to extend the job demands-resources model (JD-R model) of work engagement by proposing that in addition to job demands and job resources, as proposed in the existing JD-R model, non-work factors (e.g., non-work resources and demands) also affect work engagement and job performance. This study adopts the family and home life domain as an important non-work domain because it is well documented that family and home life issues constitute an important source of occupation-related problems affecting the mental and physical health and job performance of employees. This study posits that family and home life resources (and demands) both directly and indirectly increase (and decrease) employees' work engagement and further influence their job performance, and proposes a set of hypotheses derived from an extended JD-R model that integrates family and home life demands and resources in the model. The empirical investigation employed a diary study design with a sample composed of 45 employees of international coffee chains in Ireland. Participants completed a baseline questionnaire and eight diary questionnaires over 4 weeks ( $N=45 \times 8=360$  occasions). The results of multi-level analyses support the proposed hypotheses and thus give credence to the theoretical extension of the JD-R model presented here. The theoretical contributions, research limitations, implications for future research, and practical implications of this study are discussed.

### **O79: Workplace Bullying as a Predictor of Disability Retirement: A Prospective Registry Study of Norwegian Employees**

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Research findings show that the health status of the working population has remained stable or even improved over time. Despite this development, an increasing share of the workforce leaves the labor market prematurely. Early work-life exit is a potentially detrimental outcome for the individual and poses a social and economic challenge for societies and employers. The eligibility criteria for disability benefits in Norway are medical. To identify the risk factors for disability retirement it is therefore crucial to understand the underlying factors that may cause both health problems and disability retirement. Exposures in the psychosocial work environment, e.g., job demands, decision latitude and role conflict, have been related to an increased risk of both health complaints and disability retirement. This suggests that measures for improving work ability in a given population should take the psychosocial work environment into account.

Workplace bullying is defined as a situation in which an employee persistently and over a period of time perceives her-/himself to be on the receiving end of negative actions from superiors or co-workers and where the employee finds it difficult to defend him-/herself against these actions. With a global prevalence rate of 11-15%, exposure to workplace bullying has been established as an especially crippling and devastating psychosocial problem for affected individuals and findings show that bullying is related to both mental and somatic health complaints, as well as sickness absence. Bullying could therefore also be a potential risk factor for disability retirement. There are, however, very few studies which have investigated relationships between bullying and disability retirement, and no studies which have examined the mechanisms that can explain how exposure to bullying may lead to disability retirement.

Using data from a questionnaire survey 14501 Norwegian employees linked to registry data on disability retirement from the Norwegian registries of state paid benefits, the current study sought to answer the following research questions: 1) Is victimization from bullying a risk factor for disability retirement, 2) does victimization from bullying contribute to the variance in disability retirement over and above job demands and control, and 3) does psychological distress and somatic health complaints mediate the relationship between workplace bullying and disability retirement? Preliminary findings show that workplace bullying constituted a significant risk factor for later disability retirement within a 10 year time-span (OR=1.47; 95% CI=1.01 - 1.98). Workplace bullying (OR=1.39; 95% CI=1.03 - 1.87) was associated with disability retirement even after adjusting for the impact of job demands (OR=.99; 95% CI=.89 - 1.10) and control (OR=.76; 95% CI=.70 - .81). The relationship between bullying and disability retirement was mediated by both psychological distress ( $z=5.78$ ;  $p<.001$ ) and somatic complaints ( $z=10.19$ ;  $p<.001$ ).

The results of this study show that victimization from bullying is a significant risk factor for later disability retirement. Mental and somatic health complaints are mechanisms that can explain how workplace bullying leads to disability retirement. The findings suggest that measures for improving work ability should include primary, secondary and tertiary interventions against workplace bullying.

## **O80: Workplace Bullying in the Health Sector in Portugal**

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The aim of this paper is to analyse the role performed by some work environments variables in the emergence of workplace bullying, namely the occurrence of conflicts, role ambiguity, role conflicts, workload and leadership, in a study carried on in the health sector. According to the work environment hypothesis, bullying is primarily caused by factors related to deficiencies in work organization and leadership behaviours (Leymann, 1996; Einarsen, 2000). Such characteristics of the work environment may influence bullying directly but may also contribute to creating a stressful work climate in which bullying can flourish. Because supervisors have been shown to be the most frequent perpetrators of bullying (Zapf & Einarsen, 2011), the impact of different leadership styles on bullying may be of special interest. As such, empirical studies found both tyrannical and laissez faire leadership to be among the strong predictors of bullying (Hauge et al., 2007). Other studies have confirmed a relationship between bullying on the one hand and an autocratic leadership style and an authoritarian way of settling conflicts on the other hand (O'Moore & Lynch, 2007; Vartia, 1996). Additionally, Hoel et al, (2010) found that bullying was positively related to noncontingent punishment, with an autocratic leadership as well as with laissez-faire leadership style.

In Portugal there is scarce evidence about workplace bullying in the health sector. Thus, our goal is to further research about workplace bullying in this sector and we have realized a study in the main public hospitals of Portugal, through a snow-ball process. According to previous research in this field we hypothesized that there is a positive relationship between the occurrence of conflicts, role conflicts, workload and bullying; regarding leadership, we hypothesized a positive relationship between autocratic leadership and laissez faire leadership and bullying as well as a negative relationship between participative leadership and bullying. To test these hypotheses we used hierarchical multiple regression.

We collected 598 valid responses and the occurrence of workplace bullying, measured both through a definition and a list of behaviours, was 7,5% and 52,3%, respectively. The majority of respondents (82,7%) consider bullying a relevant organizational problem of contemporary working life. Through multiple regression analysis we found a positive relationship between role conflicts, the occurrence of conflicts, workload and the emergence of workplace bullying. We also found a positive relationship between autocratic leadership and workplace bullying; we found no association between laissez faire leadership and participative leadership and bullying. As such we confirmed our hypothesis regarding autocratic leadership and bullying; the hypotheses regarding laissez faire leadership and participative leadership were not confirmed. Our results led us to conclude that conflicts as well as leadership behaviour are important variables to consider in policies focusing the prevention of workplace bullying, despite our study is limited to the health sector and the nature of the sample.

### **O81: The Nature, Extent and Impact of Educator Targeted Bullying on School Teachers in West Malaysia**

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For the past twenty years, a wealth of research on workplace bullying has consistently demonstrated a considerable detrimental impact on employee health and well-being. While the prevalence, antecedents, consequences of workplace bullying by superiors and colleagues in school and educational settings have been reasonably well investigated, the nature and impact of educator targeted bullying (ETB), that is bullying of teachers by students, is substantially less understood. ETB is defined as aggressive behaviour in which there exists an imbalance of power between the aggressor (learner) and educator that is deliberate, repeated and aimed to harm the victim physically, emotionally, socially and/or professionally. Acts of ETB may be verbal, non-verbal, physical, direct or indirect, ranging along a continuum of seriousness (adapted from De Wet & Jacobs, 2006). Studies on ETB have predominantly examined the problem in terms of nature and type, prevalence and demographic variables associated with prevalence (Pervin & Turner, 1998; De Wet, 2010; Chen & Astor 2009), but no study has examined the potential consequences of ETB on the well-being of teachers. The purpose of the study was to investigate the nature, prevalence and impact of ETB on teacher burnout, in a sample of 575 Malaysian school teachers in West Malaysia. Specifically, it was predicted that frequency of exposure to ETB would vary by type of ETB and years of teaching experience, and that increased exposure to ETB would result in increased levels of personal, work, and student - related burnout. Years of teaching experience was also predicted to moderate the exposure-burnout relationship. Results suggest that less severe forms of ETB were more prevalent than more physical forms, with verbal abuse and ignoring being the most prevalent, and that educators with increased years of experience were less subjected to ETB. ETB was found to have a significant negative impact on all dimensions of burnout but the strongest effect was on student-related burnout. Years of experience was also found to moderate the relationship between exposure to ETB and student-related burnout. Results are discussed in relation to the role that schools, government and parents play in combatting ETB.

## **O82: Bullying from a Manager's Perspective. A Study of Bullied Managers in Different Sectors and their Work Stress**

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**Objectives:** A large number of studies have examined workplace bullying and also its relationship to work stress. So far most of the research on bullying has focused on the manager as the perpetrators of bullying, and less on the manager as the target of bullying. The strong negative relationship between bullying and work stress and mental ill-health has been reported in previous studies. However, in those studies focus has been on the employees not the managers. The main purpose of this study is to examine bullying with a focus on managers who are victims and their work stress. The material contains data from both the private and public sector. Therefore, analyses concerning difference between the sectors are performed.

**Method:** A cross-sectional study using register data collected by researchers at Karolinska Institute from private and public organizations situated in different parts of Sweden. About 6000 managers participated in the study, 67% women and 33% men. The questionnaire was originally developed during a project on work and health (aha-project). The questionnaire consists of validated instruments. Work stress was measured with the indicators high strain job (high job demands and low job control), exhaustion and difficulties to sleep.

**Results:** The results show that 3% of the managers reported that they were bullied. Divided into gender, 3.2% of women- and 2.4% of the men managers were bullied. The public sector was divided into county councils and municipalities. About 2.6% of the managers at county councils and 3.2% of the managers at municipalities reported bullying. In the private sector 2.5%. The results showed that 30% of the bullied managers also had high strain jobs and around 15% reported high on exhaustion. Finally 34% of the bullied managers had difficulty to sleep due to the job.

**Conclusion:** Around 3% of managers regardless of sector were targets of bullying. Many of them reported work stress. Since the managers have a central role in the organization, it is important to implement strategies to prevent situations where bullying exists and develop policies that include all positions in a workplace.

## **O83: Staff Burnout amongst South African Public Hospitals: Proposing Positive Psychological Resources as a Mitigation Strategy**

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The South African public health-care sector has been challenged with high levels of burnout amongst staff. Due to critical high demand for public health services and severe lack of resources, the sector has been stressed both from the perspective of employee turnover and -well-being. It is well-documented that these challenges will be sustained and even enhanced in years to come and mitigation strategies must be contextually geared to navigate through the risk for chronic staff burnout.

In this study we evaluated and established a number of positive psychological interventions as a key mitigation strategy to counter burnout amongst staff in South African public hospitals. A cross-sectional research design was implemented amongst a sample of 633 employees from 27 public hospitals in the Gauteng province in South Africa. A quantitative research design was implemented, utilising structural equation modelling to evaluate postulated direct paths and

examine possible moderating effects, particularly of the positive psychological resources under investigation. These included group - and individual level factors, such as organisational strength use climate, authentic leadership style and the established Psychological Capital constructs. The study was conducted under the theoretical auspices of the job demands-resources (JD-R) model and conservation of resources (COR) theory. Positive results were established with direct paths found between both the group - and individual positive psychological resources and burnout; as well as moderating effects being established between the challenging work environment staff in South African public hospitals face, and burnout - through these positive psychological resources. In this presentation we share the empirical findings solicited from the quantitative statistical analysis and shortly elaborate on some qualitative opinions offered by staff as part of the research project - a joint effort between the North-West University and the Sedibeng Department of Public Health in South Africa. Recommendations are made and suggestions for future research are put forward.

#### **O84: Am I Safe Here as a Patient? The Impact of Teamwork and Clinician Burnout on Patient Safety**

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About 5% of hospitalized patients are affected by preventable adverse events, half of which result severe or even fatal consequences. Previous studies have partly attributed these adverse events to high work demands and low clinician occupational well-being. Teamwork, on the other hand, which is integral to effective health care delivery, is generally seen as a resource that increases patient safety and clinician occupational well-being. However, a systematic literature review that we conducted to evaluate the state of research on relationships between teamwork, clinician well-being, and patient safety revealed several research gaps. These gaps included lack of inter-professional samples, analysis of objective indicators of patient safety and work demands, multi-dimensional conceptualizations of teamwork, and longitudinal studies that examine causal effects.

The overall aim of this research project was to gain a deeper understanding of the linkages between teamwork, clinician burnout and patient safety by addressing the research gaps mentioned above. Based on the key findings of empirical studies conducted within this project, a conceptual model integrating these concepts will be presented in this talk.

Overall, 2100 nurses and physicians working in 59 intensive care units were surveyed at three measurement points three months apart. Data on interpersonal and cognitive-behavioural teamwork, burnout and clinician-rated patient safety was collected via an online questionnaire. In addition, we obtained indicators of patient safety (standardized mortality ratios) and of work demands (nursing interventions, patient agitation) from the participating units' record systems. Data were analysed cross-sectionally and longitudinally using (multilevel) regression analyses and structural equation modelling.

Cross-sectional regression analyses of the empirical data showed that workload predicted emotional exhaustion. Moreover, risk-adjusted mortality of patients was higher on units with less effective cognitive-behavioural teamwork and emotionally exhausted clinicians. Longitudinal structural equation modelling revealed reciprocal relationships between interpersonal and cognitive-behavioural teamwork. In addition, emotional exhaustion predicted interpersonal teamwork, whereas cognitive-behavioural teamwork predicted clinician-rated patient safety.

The results offer new insights into the role of burnout in relation to teamwork and safety. The well-documented association between burnout, and perceptions of work demands and patient safety extend to objectively measurable indicators. Moreover, findings illustrate the importance of longitudinal research designs: emotional exhaustion was not an outcome of teamwork, but an antecedent that negatively affected teamwork, which, in turn, can decrease patient safety. These results stress the point that clinician burnout is not just an individual problem, but also an organisational concern that should be addressed in order to ensure effective teamwork and safe patient care.

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### **O85: Why Do They Stay, Why Do They Leave? – A Multi-Level Modelling Approach of Burnout and Turnover Intention among Child Care Teachers**

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Background: Research has repeatedly identified high levels of burnout and high turnover rates as major challenges in care professions such as child care work. This finding is worrying because burnout and turnover put the child care quality and thus child development at stake. Some research has investigated burnout and turnover among child care teachers, but our understanding of the antecedents of burnout and its relationship to turnover in the child care workforce is still very limited. Additionally, recent research about burnout suggests that co-workers experience burnout collectively at a workplace, while research investigating burnout of child care teachers has not addressed this aspect so far.

Study: Therefore, the present study addresses these research gaps by (1) modelling burnout of child care teachers as clustered in the child care centre and by (2) investigating the relationship between burnout and turnover intention of child care teachers. Based on an adaptation of the Job Demands-Resources model (JDR) by Bakker and Demerouti to the child care work context, we use multilevel modelling to identify the (1) antecedents of burnout and structural equation modelling to (2) investigate the relationship between burnout and turnover intention among child care teachers. The JDR postulates that burnout results from the extent and interplay of job demands and job resources and that burnout mediates together with positive outcomes (e.g., work engagement) turnover.

Method: The study sample is drawn from a survey about child care teachers and their directors in child care centres in a Swiss city. In total, we included 203 child care teachers and their directors (N = 38) working in 38 child care centres into the analysis. The questionnaires for child care teachers and child care directors gathered information about working conditions (e.g., adequate staffing, curriculum), job resources (e.g., team climate, role clarity), job demands (e.g., time pressure, complexity of work tasks), health outcomes (e.g., burnout, work engagement, job satisfaction), associated consequence (turnover intention) and demographics (e.g., job tenure).

Results: The preliminary results suggest that child care teachers at a child care centre are likely to experience similar degrees of burnout. The main antecedents of burnout are perceived levels of job demands and job control, employment conditions, and the age of child care teachers. Moreover, adequate staffing and positive outcomes (job satisfaction and work engagement) seem to have a greater impact on turnover intention than the experienced degree of burnout.



Conclusion: In general, good employment conditions and low job demands seem to be effective in preventing burnout among child care teachers. Empirical evidence suggests that job demands in child care work are mainly influenced by inadequate staffing. Therefore, this finding together with the high impact of inadequate staffing on turnover intention point out the importance of adequate staffing in child care work. On the other hand, positive work-related outcomes (job satisfaction and work engagement) seem to be able to buffer the negative influence of poor working environments and ultimately to determine if a child care teacher wants to stay or leave.

### **O86: The Influence of Procedural Justice and Change in Procedural Justice on Self-rated Health Trajectories: Results from the SLOSH-Study**

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Purpose: Procedural justice is defined as the perceived fairness of the organizational processes and procedures that lead to decision outcomes. It is a core and consistent predictor of employee health, including self-rated health and mental health. Justice perceptions are not stable but vary over time. Although some studies have acknowledged that time is an important source of variance in employees' perceptions of organizational justice, it remains unclear how the direction and rate of change in these perceptions influence health outcomes. The aim of this study was to investigate individual trajectories of self-rated health and to examine intra-individual differences in the trajectories over time according to procedural justice and changes in procedural justice.

Design/methodology: Data is derived from the 2008-2014 biennial waves of the Swedish Longitudinal Occupational Survey of Health (SLOSH) study, a longitudinal cohort survey approximately representative for the Swedish working population. Analyses included participants who responded to the questionnaire in at least three out of the five waves (N=9,178). Procedural justice was measured by a seven-item scale developed by Moorman. Self-rated health, a robust predictor of mortality and other key health outcomes, was measured by a single question with five response options reaching from very bad to very good. Age, sex, socio-economic status, and marital status were included as covariates. Growth curve models were employed to investigate the dynamic relationship between perceptions of procedural justice and health trajectories.

Results: Linear growth curve models showed the best fit to the data. Self-rated health declined slightly over time, from 4.08 to 3.99. Analysis of health trajectories revealed that health scores changed at an average of -0.031 ( $p < 0.001$ ) for every two years, indicating a statistically significant decline in self-rated health over time. Further, we found a statistically significant variation among respondents in both the intercept and the slope in self-rated health. Change in organizational justice has a small but statistically significant effect on self-rated health, i.e., participants who experienced an improvement in organizational justice compared to baseline (i.e. 2006) improved also their self-rated health. Age, sex, socioeconomic position, marital status, and above-average procedural justice were related to better initial health. The rate of change in self-rated health was related to age, sex, and change in procedural justice perceptions.

Implications: The study is one of the few studies on procedural justice which employs longitudinal data under the use of growth curve modelling. Few studies on organizational justice, if any, are based on representative samples as it is presented here and to our knowledge this is the first study investigating the effect of changes in procedural justices on



changes in self-rated health. Our findings support the idea that procedural justice at work is a crucial aspect of the psychosocial work environment and that changes towards more procedural justice could influence self-rated health positively. Interventions to increase employee well-being should be targeted to fair decision-making procedures. Further studies should consider the contemporary influence of work characteristics.

### **O87: The Work Environment and Me - Development and Test of the Trondheim Co-workership Scale (TCS)**

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The aim of the study was to develop and test the factor structure of a specific set of dimensions of co-workership, named Trondheim Co-workership Scale (TCS). The rationale lies in the presumed value and centrality of the concept co-workership as a strategic part of work environment surveys and organisational development. In contrast to traditional work environment measures capturing what your organisation, leader and/or colleagues do for you as an employee, co-workership relates to how employed personnel handle their relation to their employer, their colleagues, and their own work. Co-workership has become an increasingly more important concept because of the many changes in today's working life. The changes include new organisational structures, new management forms, focus on collaboration between the parts in the work life, and changed expectations to work with an increased focus on meaning at work and personal development. Up to date co-workership has been considered a Nordic concept. Nevertheless, it is considered important to all organisations who want to improve and enhance their working environment. Even though it is a widely known concept in the Nordic countries and frequently used in the practice field, there is a lack of validated measures on co-workership.

Following Hinkin's (1998) guidelines of scale development, qualitative interviews were conducted as a first step. The interviews suggested responsibility, initiative, and participation related to the organisation, colleagues, and tasks as the core content of co-workership. Based on these interviews 33 items of co-workership were developed and tested by an online survey among 617 Norwegian employees from a variety of different occupations. The factor structure was tested by confirmatory factor analyses (CFA) by AMOS. CFA supported a three factor structure of co-workership with responsibility, initiative, and participation related to the organisation, colleagues, and tasks. Co-workership might provide new perspectives and intervention possibilities for all organisations who want to promote health and well-being for their employees. The present study suggest that the Trondheim Co-workership Scale (TCS) have promising psychometric properties, and seems to be a valuable measure for work environment surveys and organisational development. These findings are preliminary and replication studies are needed before firm conclusions can be made.

### **O88: Why Do Managers Leave Their Organisation? Investigating the Role of Ethical Organisational Culture in Manager Turnover in a 4-year Follow-Up Study**

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The main aim was to examine 1) whether an ethical organisational culture predicts turnover among managers in a four-year follow-up period, measured at two time points, 2) what are the reasons managers name for turnover, and 3) whether an ethical organisational culture is associated with these reasons.

The first subsample consisted of 450 managers from different organisations, who had provided some information about their ethical organisational culture in 2009 (T1) and information about their turnover in 2011 (T2). The second subsample consisted of 308 managers who had reported their perceptions about their organisation's ethical culture in 2011 (T2) and information about their turnover in 2013 (T3). The third subsample consisted of 124 managers who reported the reasons for their first turnover and of 258 managers who did not change their job during the measurement period ( $n = 382$ ). Ethical organisational culture was measured with the Corporate Ethical Virtues scale (CEV; Kaptein, 2008) at the study baseline in 2009 (T1) and follow-up in 2011 (T2). Turnover was investigated by asking participants if they had changed their job (yes/no) in 2011 (T2) and 2013 (T3). The timing and reason for turnover was inquired, and the answers were categorised to five turnover reason categories (presented later) that were compared to the group of stayers in further analyses.

Logistic regression analyses showed that an ethical organisational culture, and especially the virtues of ethical example of supervisors and senior management, was associated with fewer turnovers among managers. Managers' reasons for turnover were categorised into five categories and the group of stayers was added to the model as a control group: (1) Stayers 68 % ( $n = 258$ ) (2) Lay-off / severance pay 12 % ( $n = 44$ ), (3) Career development and new challenges 10 % ( $n = 38$ ), (4) Dissatisfaction with the previous job or organisation 4 % ( $n = 17$ ), (5) Organisational change 3 % ( $n = 13$ ), and (6) Decreased well-being or motivation; illness 3 % ( $n = 12$ ). ANCOVA analyses showed that those managers who stayed in their organisation also perceived their ethical culture as more ethical than all the job changers' groups. The lowest ratings for ethical culture were given by those managers who had changed their job due to dissatisfaction with the job or organisation.

### **O89: Integrating Gender Equality within the Corporate Social Responsibility (CSR) Strategy in Latin America**

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Many corporations have already recognized their responsibility to society and now are responding to its demands. However, organisations commonly far from just accept their social responsibility (CSR), they have responded showing different levels of responsiveness. Then, the prime focus of CSR is not on managers accepting a moral obligation but on the CSR level of development and the kind of social actions implemented. As such, a fundamental problem with CSR is that companies usually do not have a formal strategy, but rather numerous disparate programs and initiatives not connected. Even when a CSR agenda exist, this takes the form of philanthropy, focusing mainly in community projects and social investment. Additionally, issues relevant to particular stakeholders such as women and gender equality have acquired less attention. At this respect, although Latin America has made significant progress in promoting gender equality over the past 20 years, the integration of business in this agenda is still weak. Even when addressing gender issues, it is still not clear how they can be included as a part of the CSR strategy. As a result, this study aims at identifying the relation of CSR-development and the implementation of specific gender strategies in Latin American companies. It draws on the literature about corporate social responsiveness, CSR-development stages, and the gender in organisational theory.

This is a survey-based study implemented in public and private companies from Spanish speaking countries in Latin America. Data is being gathered by an online-survey with designed for this study. The survey uses a 5-points Likert-scale and is composed by a CSR section and a gender section. The CSR section measures seven CSR-development stages, and the gender section measures five gender strategies in organisations. In order to identify items, relevant CSR scales, standards and tools were reviewed. The content validity of the initial version of the

survey (32 items CSR section and 24 items gender section) was tested by consulting 9 CSR experts and 8 gender in organisations experts. Average expert agreement was of 88 and 87%, respectively. The final version of the surveys is 30 CSR-related items and 24-gender related items. The survey was designed to be answered by managers or related specialist. A non-probabilistic sampling method was considered. To access participants, 190 employers' associations and RSE organisations were asked to publicise the survey, and 814 people from a LinkedIn profile designed for this study and launched in August 2014 were also contacted. Regression analysis will be used to analysed the data. This is a research in progress. The data collection ends in December 2015. Results will be presented at the conference.

#### **O90: Stress Sources and Manifestations in a Nation-wide Sample of 3.447 Greek Pre-primary, Primary and Secondary Educators**

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Teachers experience high levels of occupational stress as a result of their profession, and research on this phenomenon has been a subject of growing interest in the recent years. The aim of the presented study was to explore the association of educators' stress sources and manifestations with individual and job-related characteristics.

In a cross-sectional design, following an informative e-campaign on the study aims, which was posted on the official and the main teachers' portals in Greece, respondents were invited to voluntarily complete online the Teachers Stress Inventory (TSI) and the 14-item Perceived Stress Scale (PSS-14), during the spring of the 2012. 974 male and 2473 female pre-primary, primary and secondary educators with a mean age of 41.2 years, formed the study sample. Multiple linear regression analyses was used in order to investigate possible associations of study variables with TSI subscales.

Significantly higher levels of stress and more emotional and gastronomic manifestations were recorded in women and younger teachers, mainly due to time management and work-related TSI stressors. Age and working experience were associated with lower stress levels in several stress TSI source-dimensions and in emotional and fatigue manifestations. Teachers with a university degree had significantly lower scores on "Time management" and "Work-related" stressors subscales, and significantly greater scores on "Emotional" and "Cardiovascular" manifestations compared to those with a MSc and/or PhD degree. Workplace being far from hometown elevated teachers' stress levels relatively to "Professional investment" and "Discipline and motivation" TSI dimensions. Curiously, professional distress was lower for substitute teachers compared to those with permanent positions, and for teachers working in private schools compared to those working in public ones. Teachers of pre-primary education scored lower in "Professional investment" and "Motivation" dimensions, while vocational lyceum teachers scored lower in "Work-related" stressors and manifestations and higher in "Discipline and motivation" subscale. Additionally, having students supported or in need of support from special educators, and having students with difficulties in speaking or comprehension, were associated with most of the teachers' TSI stress sources and manifestations. Finally, colleagues' and mainly supervisors' support appeared to form a strong and consistent protective buffer against both teachers' stress sources and manifestations.

Educators' stress caused by certain sources could be significantly dealt with, and inappropriate stress manifestations could be prevented to an important extent, by the conduction of stress-management training and by the teaching of coping and empowering techniques during teachers' graduate studies. Additionally, enhancing supportive and helpful relations in the workplace by revising the school operation regulation and by communicative skills' training, could also serve as an important protective factor.

## **O91: Awakening Assessments of Secretory Alpha Amylase Mediate the Relationship between Effort-reward Imbalance and Self-Reported Health**

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Secretory Alpha Amylase (sAA) is a digestive enzyme linked to increased activation of the sympathetic nervous system and perceptions of acute stress. The sAA awakening response however, has rarely been investigated and may provide a window for understanding the underlying physiological changes that relate to work stress as assessed by increased effort-reward imbalance (ERI; Siegrist, 1996). The sAA awakening response has an inverse association with the cortisol awakening response with a sharp decline in the 30 minutes post-awakening. We sought to assess if ERI or self-perceived mental and physical health were associated with the sAA and cortisol awakening responses and additionally sought to determine the strongest relationships and statistical paths between these variables.

Australian rural tradeworkers ( $n = 78$ ) provided morning saliva samples at awakening and 30 minutes thereafter that were assessed for cortisol and sAA secretions. The participants also provided hard-copy responses to a series of questionnaires that assessed ERI, perceived life stress and mental and physical health.

Four linear regressions identified significant relationships between ERI and, in order of strength; mental health ( $R^2 = .35$ ), physical health ( $R^2 = .09$ ), awakening sAA ( $R^2 = .05$ ), and awakening cortisol ( $R^2 = .05$ ). Two hierarchical regressions were then conducted to assess the relationship of ERI and the physiological indices with physical and mental health. In Step 1, overcommitted disposition, life stress, and ERI were entered; and in Step 2, sAA and cortisol awakening responses were entered. The Step 2 variables were related with physical health  $F(2, 62) = 8.37$ ,  $\Delta R^2 = .14$ , with the main finding that greater declines at time 2 for the sAA awakening response were strongly associated with decreased physical health perception ( $\beta = .40$ ,  $p < .01$ ). A mediation analysis confirmed a fully mediated relationship for the ERI-sAA awakening response- physical health path.

Our findings suggest the relationship between ERI and physical health was mediated by sAA, potentially indicating that changes in this enzyme may have adverse health implications. A number of studies have made association between sympathetic markers and ill-health, but sAA has rarely been assessed. Further research that considers the relationship between work stress, sAA awakening response, and health status in prospective designs will elucidate our understanding of the underlying mechanisms responsible for the stress-ill-health relationship.

## **O92: Unemployment and Work-Related Factors in Suicidal Behaviour: Findings from the Suicide Support and Information System in Ireland**

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Introduction: Internationally, the 2008 recession was associated with higher rates of suicide among working-aged people. Research in Ireland before 2008 showed an association between unemployment rates and risk suicide rates. International studies also identified an increased risk of suicide associated with certain jobs such as medical, agricultural, and low paying occupations. The current study aims to elucidate the impact of employment status and specific work-related factors on suicidal behaviour in Ireland during and post-recession.

**Methods:** In 2008, the National Suicide Research Foundation, Ireland established the Suicide Support and Information System (SSIS) using the psychological autopsy approach. In total, 307 cases were recorded by the SSIS in Cork between September 2008 and June 2012. Coroner's checklists were completed for all cases. In 2014, SSIS was reinstated and enhanced (SSIS-ACE study) with the addition of comparison groups (high-risk self-harm patients and general practice controls) and a more detailed analysis of work-related factors. Using interviews and standardised questionnaires, multiple sources of information are being accessed (coroners, family informants, self-report, and health care professionals). Information relating to 73 suicide cases has been collected from coroners' reports to date.

**Results:** Of the 307 cases (275 suicides and 32 probable suicides) in the SSIS, 40.6% were employed and 33.1% were unemployed. 41.6% had worked in the construction/production sector, followed by agricultural sector (13.2%), sales/business development (8.9%), students (8.2%), healthcare (6.6%) and education sector (3.9%). Employment status was significantly associated with living arrangements, alcohol in toxicology, and drugs in toxicology. Moreover, a higher proportion of individuals employed in healthcare or services sector had received psychiatric treatment in the year prior to death, compared to other sectors. The majority of those who were unemployed at time of death worked in the construction and production sector, whereas those in employment worked in the production and agriculture sectors. Those from the construction or production sector were more likely to be male, younger, unemployed at time of death, and to have alcohol in their toxicology. Interim analysis from the ongoing SSIS-ACE case-control study will be presented with findings related to occupational and employment status among suicide cases.

**Discussion:** The SSIS findings support the relevance of employment and work characteristics to suicide and self-harm. Unemployed individuals showed a range of co-occurring risk factors, including drugs in toxicology, physical illness and psychiatric treatment. The ongoing work to identify job characteristics linked to higher suicidal behaviour will also inform work-related suicide prevention measures. Priority may be given to the construction and production sector in the application of these measures as these areas of activity were more common among suicides. Tailored training for healthcare and occupational health professionals, as well as a closer collaboration with mental health support services, are recommended to provide the needed support and prevention for individuals at risk.

### **O93: The Mediating Effect of Attributions on the Relationships between Workplace Incivility and Employees' Depression and Job Satisfaction**

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**Objectives:** Workplace incivility refers to rude behaviors that violate social norms at work (Cortina, Magley, Williams, & Langhout, 2001). A key feature of incivility is ambiguous intention to harm (Andersson & Pearson, 1999). Incivility has been linked to employees' job strains, such as psychological distress and job (dis)satisfaction (e.g., Cortina et al., 2001; Leiter, Price, & Laschinger, 2010). However, employees' cognitive process that underlines incivility-job strain relationships has not received sufficient attention. The first goal was to examine the relationships between incivility and employees' external (blaming others) and internal attributions (blaming self, Weiner, 1985). Since victims may simultaneously make both types of attributions (e.g., Hershcovis & Barling, 2010), we hypothesized that incivility would be positively related to both external and internal attributions (H1a & 1b). The different attributions may lead to different outcomes. According to the social exchange theory (Blau, 1964), social interactions follow a rule of reciprocity. When victims make external attribution and blame

others for incivility, they will have negative attitude toward other employees and experience job (dis)satisfaction (H2a). On the other hand, the internal attributions are especially harmful to victims' personal strains, such as negative emotions directed internally. After blaming oneself for the incivil behaviors received at work, victims may impose strong self-doubt and feel depressed (H2b). Therefore, we predicted that external attributions would mediate incivility in relations to job satisfaction (H3a) while internal attribution would mediate incivility in relations to depression (H3b).

**Methods:** We conducted a time-lagged survey study and data were collected from 142 call center representatives. At time 1, the Workplace Incivility Scale (WIS, Cortina et al., 2001) was used to measure incivility. After the incivility scale, we assessed their external (3 items) and internal attributions (4 items, Hershcovis & Barling, 2010). At time 2, we collected data on depression (5 items, Bohannon, Maljanian & Goethe, 2003; Radloff, 1977) and job satisfaction (3 items, Cammann, Fichman, Jenkins, & Klesh, 1979).

**Results:** Supporting Hypothesis 1a and 1b, incivility was positively related to external attributions ( $r = .26, p = .00$ ) and internal attributions ( $r = .13, p = .03$ ). External attributions was negatively related to job satisfaction (T2) ( $r = -.28, p = .00$ ) and internal attributions were positively correlated with depression (T2) ( $r = .19, p = .02$ ). Hypothesis 2a and 2b were supported. Finally, we used the bootstrapping method with Preacher and Hayes' (2008) SPSS macro to test the mediating hypotheses. External attributions mediated incivility in relation to job satisfaction (T2), while internal attributions mediated incivility in relation to depression (T2).

**Discussion:** Using field data collected at two time points, our findings suggested there might be two distinct pathways with regard to processing workplace incivility through attributions. External attribution mediated incivility in relation to an organizational strain of job (dis)satisfaction while internal attribution mediated incivility in relation to a personal strain of depression. Although workplace incivility presented a general harm to employees well-being and work attitude, how victims of incivility "decipher" the perpetrators' intention played important roles on the consequences of incivility.

#### **O94: Does Work-Family Enrichment Enhance the Well-Being of Working Fathers?**

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This study examined the relationship between two directions of work-family enrichment and four dimensions of personal well-being amongst working fathers in South Africa ( $N = 222$ ). Psychometric analyses evidenced the expected dimensionality and reliability of the adapted scales. The two dimensions of work-family enrichment, work-to-family enrichment (W2FE) and family-to-work enrichment (F2WE) explained significant variance in the psychological, emotional and social well-being of working fathers. Age and F2WE also significantly predicted physical well-being. The findings of this study shows that participation in multiple life roles enhances the well-being of working fathers and suggests that organizations facilitate work-family enrichment to improve the positive engagement and well-being of working fathers in their employ.



### **O95: The Impact of Work Stress on Recognition of Need and Intention to Improve Physical Health in the Canadian Workforce: Results from a National Survey**

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**Purpose:** To examine the association between work stress and recognition of need and intention to improve physical health.

**Methods:** Data from 25,116 respondents to the 2011-2012 Canadian Community Health Survey was analyzed. To measure work stress, participants described most days at work as not at all, not very, a bit, quite a bit, or extremely stressful. Participants were divided into three groups: those who did not recognize a need (no known need), those who recognized a need but had no intention (known need), and those who both recognized a need and intended to improve their physical health (intention). Multivariate multinomial logistic regression was used to investigate the relationship between work stress and recognition of need and intention to improve physical health, adjusted for confounders.

**Results:** A positive, dose-response relationship was found between work stress and recognition of need and intention to improve physical health. Employees with the highest level of work stress had an increased odds of being in the known need (OR = 1.64, 95% CI = 1.06, 2.53) or intention (OR = 1.87, 95% CI = 1.33, 2.62) groups compared to employees with the lowest level of work stress in models adjusted for age, sex, education, number of hours worked per week, and self-rated health.

**Conclusion:** This study provides suggestive evidence of a positive, dose-response relationship between work stress and recognition of need and intention to improve physical health. Workplace interventions to improve physical health should consider that employees with work stress are poised to participate and ultimately benefit.

### **O96: Nothing is More Important than Health Promotion: The Relationship between Different CSR Activities and Commitment**

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Workplace health promotion is one type of internal CSR activities (EU green paper CSR, 2001). However, only a few studies have already considered health promotion as activity of corporate social responsibility (CSR), and even less studies focused on workplace health promotion as activity of CSR (Monachino & Moreira, 2014). Aside internal CSR like health promotion, organizations are able to accomplish several external CSR activities. These external activities may be oriented to human rights, global environment, or include the involvement of business partners, supplier, and consumers (EU green paper CSR, 2001). Regarding organization's employees, CSR activities were multiply demonstrated to affect organizational attractiveness and types of commitment (cf. Gond, El-Akreimi, Igalens, & Swaen, 2010). Gond et al. (2010) postulated that CSR activities may affect employees more strongly when these activities are oriented toward them. Following this, external CSR activities that also refer to employees, such as employees as consumers of the organizations' products, affect employees more strongly than internal CSR activities that do not directly refer to employees, such as organization's adaptation to change.

According to Gond et al. (2010), CSR affects employees' attitudes and behaviors via organizational identification and social exchange. Regarding organizational identification, a meta-analysis by Riketta (2005) showed the higher the job level, the higher organizational identification is. Therefore, employees with managerial responsibility may react different to several CSR activities than without managerial responsibility.

The current paper considered the importance of health promotion and other CSR activities for employees' affective commitment. Additionally, we examined managerial responsibility as a moderator in the relationships between CSR activities and affective commitment. The results indicated that employee-oriented CSR activities affected employees' commitment more strongly than other corporate activities. Within the CSR activities, health promotion plays an important role. Moreover, managerial responsibility moderated some CSR activity-commitment relationships but in different ways. The perceived form of social exchange related to the specific CSR activity is discussed as an explanation for the different moderation patterns. The results illustrated that a detailed consideration of the group of employees is needed when investigating the influence of CSR. According to Gond et al. (2010), this is especially important because CSR affects employees' attitudes and behaviors which in turn are directly related to the organization's performance.

### **O97: Talk or Run: Seeking Support and Exercising Help Mitigate the Negative Effects of Process Conflict on Entrepreneurial Health through Mental Preoccupation with Work**

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Although small and medium-sized enterprises build the heart of most economies, little is known about determinants of the health of the business owners. In this study, we aim to suggest a process by which a common stressor for owner-managers is linked to health through mediation and moderation.

The allostatic load model (McEwen, 1998, 2007) suggests that a short activation of physiological systems of the body does not lead to harmful health effects; it is the sustained activation that is harmful to the individual. And according to the perseverant cognition hypothesis, it is the cognitive processes, the thinking about work-related issues outside of work, which sustains the mental representation of a stressor (Brosschot, Gerin, & Thayer, 2006). This state of ongoing work-related thoughts, which we refer to as mental preoccupation with work (Eib, von Thiele Schwarz, & Blom, 2015; von Thiele Schwarz, 2011), has been shown to have a negative impact on recovery and health.

Mental preoccupation with work can be elicited by a number of different stressors. In our sample of business owner-managers of small to medium-sized enterprises, a frequent job stressor is conflict with employees. Process conflict has been identified as a unique source of stress which involves delegation of duties and responsibilities in the work unit; that is how a task should be accomplished (Jehn, 1997). Examining individual strategies to counter negative effects of stressors has been a major research interest in the past decades (Folkman & Moskowitz, 2004). Seeking instrumental support is a common coping strategy to deal with a problem proactively (Beehr, Jex, Stacy, & Murray, 2000).

Despite the numerous coping strategies that have been studied, physical activity and exercise have been neglected by management scholars. In the health promotion area, the efficiency of physical activity is considered clinically proven (Carson, Baumgartner, Matthews, & Tsouloupas, 2010; Salmon, 2001; Toker & Biron, 2012). In the management literature, the topic of physical activity, however, has been largely neglected.

In this paper, we aim to lay out a process of how a specific type of conflict can be harmful for entrepreneurs' health. Based on the allostatic load model (McEwen, 1998, 2007), we predict that the relationship between process conflict and self-rated health is mediated by mental



preoccupation with work. We also suggest that seeking instrumental support and physical activity moderate the relationship between mental preoccupation with work and health. Panel data from owner-managers of small- and medium-sized businesses mostly support the hypotheses. The discussion focuses around future avenues for a better understanding of stressor-strain relationships for business owners. Moreover, we suggest that physical activity such as exercise should be given a more prominent role in the organizational psychology literature.

## **O98: The Quality of Working Life of Registered Nurses in Canada and the United States: A Literature Review**

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**Objective:** The aim of this paper was to perform a literature review on nurses' quality of work life.

**Methods:** Using publications from the 2004-2014, literature on variables that are contributing factors to North American nurses' job satisfaction, stress, work ability and retention were analyzed and critiqued. The review was structured using Work Disability Prevention Framework. Sixty-six articles were selected for analysis from two literature databases, CINAHL and Medline.

**Results:** Major areas for improvement to nurses' quality of work life included treatment of new nursing graduates, continuing education, positive collegial relationships, stress-reducing programs, and financial compensation. These can be achieved within the workplace through positive interactions with colleagues and nurses involvement in organizational decisions and programming, and in the public by lobbying for improved compensation.

**Discussion:** The evidence of literature examining nurses' job satisfaction, occupational stress and overall quality of working life suggests that alternations are needed within the workplace and across the health care system. A shift in health care systems across North America is warranted where health care delivery and services are improved and aligned in conjunction with the health of the nurses working in the system.

## **O99: Employability: A Question of Ageing? A Systematic Review Examining Relations between Age Operationalizations and Employability**

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We aimed to provide the first systematic review of earlier empirical research examining relations between different operationalisations of the concept of ageing at work (i.e., calendar age, organisational age, life-span age, psycho-social age, and functional age) and indicators of employability. We conducted a systematic literature search using PsycINFO (and the key words: age, psychosocial age, organizational age, life span age, functional age and employability, lifelong learning). Our literature search resulted in 120 records. Two raters evaluated the abstracts of the resulting references, and subsequently distinguished k=17 relevant studies that met the inclusion criteria for the systematic review. Our review revealed that no consistency in used operationalisations, and theoretical basis to measure the concept

of employability. Moreover, the majority of studies included a cross-sectional design and calendar age as an indicator of ageing at work. Concerning the findings for the relations between ageing and employability, our literature review revealed mixed results for the relations between calendar age and employability (16 studies), positive relations between functional age (health) and employability (4 studies). Non-significant or negative relations were found between job tenure and employability (3 studies), whereas positive significant relations were found between life-span age (measured as financial situation or salary) and employability. No empirical study examined the relations between psychosocial age and employability. We summarized the main results in a new overarching model for future studies to examine indicators of employability.

### **O100: Paramedics - What Chance of Working Longer?**

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Recent rises in public sector employee pension age have led to speculation over the impacts on employees and service delivery. This issue comes into sharp focus amongst Paramedics working in the UK's National Health Service. Paramedics will experience some of the largest increases in pension age. Legislative changes introduced in 2011, mean that NHS paramedics occupational pension age will rise to 68 years by 2028. Ambulance staff are exposed to high levels of psychological stress, working long hours as well as physiological demands associated with lifting, carrying and pushing patients, in the context of unprecedented increases in the demand for accident and emergency services. Key policy questions surround whether older paramedics have the physiological and psychological capacity to meet high job demands into their late 60's; whether older workers should be expected to cope with the same job demands as their younger colleagues and what changes to the organisation of work might support the retention of older paramedics. The paper reports on initial findings from a 48 month research programme, funded by the UK Medical Research Council, that uses a case study approach to address these and related questions. The paper discusses the relative impact of headline push and pull influences that impact on older employee (50+) preparedness and capacity to remain in the paramedic role, and what changes to this choice architecture (e.g. job demands, work rate; working hours) might support employee retention.

### **O101: Perceived Organizational Injustice and Work-Related Activities Off-Work Interacts to Predict Rumination among Older White-Collar Workers**

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Studies based on different samples have unanimously shown that while older workers neither report more frequent work stress nor elevated work-related health problems than younger workers, high job strain relates stronger to increased need for recovery from work and mental strain for older workers. It has been firmly established that non-voluntary cognitive representations of stressors, emotional rumination, often prolong stress reactivity after the actual stress exposure has ended; and it may be that this process may even continue as an unconscious process. Rumination over work-related issues relates negatively to long-term health and wellbeing outcomes. While work-related rumination mostly has been conceptualized as a moderator in the stressor-strain process, a recent study found job-related stressors also affect work-related rumination during free time, and can thus be understood also as an outcome response to work-related load. The purpose of the present study was to analyse whether established stressors - work-related activities during free time, and perceived organizational injustice - related differently for younger and older workers to post-work ruminative thinking about work.

The sample consisted of 76 British white-collar workers (age  $md=45$ ; 31% females; work hours per week  $md=38$ ) with a wide occupational variation. The majority were classified as "professional" or "semi-professionals". Post-work diary data was collected hourly 6PM -10PM over a full week; where time spent on various types of activities were recorded, as was the frequency and intensity repetitive or intrusive thoughts about work. Perceived organizational injustice were measured by 5 items from the Whitehall II study ( $\alpha .81$ ) in a survey distributed to the participants at the initial phase of the study. Factorial ANOVA was used for the statistical analyses, where separated analyses were performed for younger ( $<45$ ) and older ( $46+$ ) workers. The predictor variables, work-related activities during off-work time and perceived organizational justice, were dichotomized at the median.

The results of the study found age was neither significantly correlated to any of the work stressors, nor to rumination. Work-related activities had a significant main impact on work-related rumination for both age groups. While perceived organizational injustice had a significant impact on rumination for the older ( $F=11.97$ ;  $p<.01$ ) it failed to affect the outcome for the younger workers. There was also a significant interaction ( $F=6.32$ ;  $p<.05$ ) between these two predictor variables for the older, but not for the younger workers. Older workers with the combination of high perceived organizational injustice and those who spent more time on work-related tasks during off-work hours reported interactively elevated emotional rumination.

The results from this study add to the findings on age-related sensitivity to psycho-social workload. Since the average age in the workforce in most industrialized nations has been increasing and is expected to increase further in the foreseeable future, it ought to be of high priority for policy maker and employers to adjust the work content and working conditions to promote a sustainable work life.

### **O102: Aging and Engaging: Work Engagement Along the Career Span**

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Despite the vast research on work engagement, little is known about the resources that influence engagement along the different stages of the career cycle. Previous work has focused on job conditions or job resources, but has failed to address engagement differences between generations. Three main arguments support the relevance of the research. First, since the workforce in most industrialized countries is aging and becoming more age-diverse, it is important to understand what engages the different generations that interact at the work. Second, it is important to identify which intergenerational interventions may increase the share of knowledge among workers. Third, in the current depressive economic context, as the vast majority of organizations face budget restrictions, knowing the resources that enhance work engagement along the different stages of the career cycle is determinant to craft Human Resources initiatives that maximize the return on people.

Our study aimed to test a model developed on a previous research at EDP Produção, the major electricity generator company in Portugal. EDP Produção has 1200 employees in Portugal and 400 in Spain, and is facing a common challenge in the power industry: more than 30% of their workforce will be retiring in the next 5 years. Two hypotheses were tested: (1) Is it possible to maintain a high level of engagement along the career cycle? (2) Are the resources that influence engagement valued differently by the employee along the career cycle? An online survey was built in order to evaluate the level of engagement and the job resources that influence engagement at work. 502 questionnaires were collected which compose our data. Several statistical analyses were applied.

Results demonstrate several relevant considerations. First, the level of engagement is high and there are no significant differences among ages although baby boomers score higher even though they are in "phase out". Second, the resources considered most important to influence engagement are those related to learning: opportunities to develop competencies and opportunities to embrace challenges. Third, it demonstrates that old people value participating in knowledge transfer initiatives. Moreover, it was possible to verify that those employees who value the most the transmission of knowledge were those with a higher level of engagement. Results demonstrate that learning may have a crucial role on the level of engagement through the entire career span, and that the differences among generations should be considered when HR initiatives are designed.

### **O103: The Use of MBSR in Stress Management Intervention in an Extractive Sector Company**

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Stress management intervention (SMI) is a set of planned and organized actions to eliminate or reduce occupational stress. Mindfulness-Based Stress Reduction (MBSR) is a meditation training in which a person learns to be mindful in order to control emotions and to act effectively. This technique reduces work-related stress resulting from imperilment.

This SMI was conducted between June 2013 and September 2015 as an experimental program involving 100 out of 3300 employees in a copper mine company. The participants, chosen by top management and health-and-safety specialists, were psychologically diagnosed before taking a 40-hour-long MBSR training and supplementary workshops to improve coping with stress skills. The SMI had 7 steps:

1. Preliminary analysis of sources of stress based on discussion with CEOs and health-and-safety managers; description of chosen participants; analysis of organizational climate for implementation and actions to promote the SMI.
2. Defining general and specific goals using SMART technique yielding 5 soft-skills goals (improving skills of coping with stress, self-motivation, work responsibility, conflict solving and communication) and 3 economic goals (decrease of sickness absence, decrease of the number of accidents, increase in productivity).
3. Psychological diagnoses using 4 questionnaires (OSI, JCQ, GHQ-28 and authorial special-purpose questionnaire) of each of 100 participants, and 76 employees from control group.
4. Consultations with top management, white and blue-collar workers, health-and-safety department and HR department.
5. Establishing the final shape of the SMI:
  - 40-hours MBSR training
  - 16-hours' workshop of self-motivating and conflict solving
  - 16-hours' workshop of learning communication skills for white-collar workers
  - The longitudinal plan of improving workstation safety and ergonomy
6. Implementation of the program - MBSR and workshops for all participants.
7. Assessment of the intervention (the process and effects).

Results are based on two diagnoses (using the same 4 questionnaires as above) - directly after the SMI implementation and 3 months later, and on the interviews with participants and supervisors.

1. 11% less participants suffer from high stress connected to specific environmental conditions underground and fear.

2. Participants declare the increase of conflict solving skills. Stress coming from this source decreased by 6%.
3. The decision latitude measured by JCQ increases from 67 to 73. High level of latitude and quite low psychological demands suggest lower level of work-related stress.
4. On the basis of interviews, communication skills improve. The results from questionnaires do not confirm those declarations.
5. There is no significant difference in sickness absence and level of work accidents.

The MBSR training for this specific group of workers was successful in terms of stress reduction. Also soft-skills workshops reduced stress. The most difficult part of the program was to organize workshops for workers who are indispensable in the basic processes of copper extraction. There are problems with analysis of sickness absence and the level of accidents because there are only statistics for each department, not for the SMI participants, who were from different departments and they represent only 3% of the whole staff.

#### **O104: The Effects of Transformational Leadership and Intervention Specific Leadership on the Short and Long Term Use of a Web-Based Occupational Health Intervention**

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Occupational health interventions that aim to improve employee psychological health and well-being are recommended to be at both individual and organizational level. However, research on the effects of organizational level interventions has shown mixed results. It is suggested that research on the intervention process could increase the understanding of how and why organizational level occupational health interventions have the desired effect or not. One area of specific interest is the manager's influence on the intervention process. Current research on management in the intervention process points out the importance of manager's behaviors that are related to the specific intervention at hand. In order to increase the understanding of not only what leadership behaviors relate to the intervention process but also how and why manager's leadership behaviors influence the intervention process it is recommended that transformational leadership theory is used. This study is a process evaluation of manager's influence on the implementation of an occupational health intervention. The aim is to test the influence of transformational leadership and intervention specific leadership on the short term and long term use of a web-based occupational health intervention.

The intervention was a web-based system to improve employee's health and work environment that operated on both the individual and the organizational level. Employee's perceptions of their manager's transformational leadership behaviors and intervention specific leadership behaviors were used to predict process outcomes in terms of employees' use of the intervention. Use was continuously measured as the employee's frequency of logins with the web-based system. Poisson regressions in SAS were used to analyze the data.

Preliminary analysis showed a direct effect of intervention specific leadership behaviors on short term and long term usage of the intervention. There were no direct effects of transformational leadership on either short term or long term usage, but transformational leadership had indirect effects mediated through intervention specific leadership behaviors.

The results suggest that the manager's intervention specific leadership behaviors that are directly related to the intervention such as communication, attitude, feedback and activity level regarding the intervention was more important than general leadership behaviors found to be associated with successful leaders.

This study extends current research by 1) combining and comparing transformational leadership and intervention specific leadership, 2) measuring intervention specific leadership during the intervention process to capture the leadership behaviors performed in relation to the intervention, 3) using objective measures of exposure to the intervention (rather than self-ratings), 4) using a case that is both an individual and an organizational intervention.

### **O105: Factors Affecting the Ability of Healthcare Commissioners and Practitioners to Implement Best Practice Guidelines in NHS Alcohol Services**

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**Background:** Alcohol misuse is a large and growing public health problem in the UK. The National Institute for Health and Care Excellence (NICE) has published a Quality Standard for alcohol misuse (QS11). This is a prioritised list of statements designed to drive measurable quality improvements in the care of people who are alcohol dependent or who drink in a harmful way. However, very little is known about how this and other Quality Standards are currently being implemented in practice.

**Aims:** To gather data on how widely and how well QS11 is being implemented across 3 London Boroughs; To gather data on what are the barriers and facilitators for healthcare commissioners and practitioners implementing QS11; To examine the implementation of QS11 from the perspective of healthcare commissioners and practitioners.

**Method:** A qualitative interview study was undertaken with individuals with direct experience of commissioning, delivering or using alcohol healthcare services. Thirty-eight participants were identified and recruited using a respondent-driven sampling approach. The interviews were recorded, transcribed verbatim, and analysed by two data coders using directed and conventional content analysis approaches. The work of the data coders was checked by a data auditor.

**Results:** The conventional content analysis revealed 7 themes regarding barriers and facilitators affecting implementation of the Quality Standard. These were: (i) variability of implementation across and within Borough, sector and care setting; (ii) differences between specialist versus generalist settings; (iii) poor communication between healthcare settings; (iv) organisational barriers to implementation; (v) the special case of children and young people; (vi) the impact of governance structures and leadership; and (vii) the views of and about service users'. The directed content analysis synthesised interviewees' responses about quality and quantity of implementation, and barriers and facilitators to implementation individually for each of the 13 constituent statements of QS11.

**Conclusions:** QS11 was created as an organisational intervention to improve the quality of care received by people in NHS funded settings who misuse alcohol or who are alcohol dependent. However, difficulties in implementing QS11 by healthcare commissioners, providers and practitioners means that services may be delivered in ways that are known to be suboptimal. The research highlights the characteristics of working environments that are challenging or stressful for healthcare commissioners or practitioners. Interventions to improve the quality of care delivered should attempt to address some of the themes identified by this research.



# **O106: Psychosocial Risk Management in the European Health and Social Care Sector: Factors Predictive of the Implementation of Procedures and Measures to address Psychosocial Risks.**

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Psychosocial risk management in the European health and social care sector: factors predictive of the implementation of procedures and measures to address psychosocial risks. The aim of this paper is to determine those factors that affect the management of psychosocial risks in the European health and social care sector. The health and social care sector is one of the most important in the EU. It provides jobs for around one in ten workers, and makes a significant contribution to the health and wellbeing of society. The sector will likely expand to meet the needs of the ageing population. Changes in contemporary working conditions have resulted in a recognition of the major challenges posed by psychosocial risks to occupational safety and health. Concern about work-related stress, bullying and harassment, and violence is greater in the health and social care sector, than in any other. Exposure to these risks impacts on workers' health, and potentially on the service they provide, with implications for those for whom they provide care. The effective management of psychosocial risks in the health and social care sector is therefore essential. This paper examines the impact of occupational safety and health management activity, concern for psychosocial risks, and a number of drivers and barriers, on the implementation of psychosocial risk management procedures and measures. Data on 2,141 establishments within the health and social care sector across 31 European countries were extracted from the dataset collected for the EU-OSHA European Survey of Enterprises on New and Emerging Risks. Managers' survey responses were analysed using logistic and Poisson regression. Based on the results, implications for psychosocial risk management practice in the European health and social care sector are discussed.

# **O107: Workplace Characteristics Mediate the Relationship between Transformational Leadership and Motivation**

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This study looks at the relationship between transformational leadership, workplace design characteristics, and intrinsic motivation. A lot has been written about the effects of leadership on climate and motivation, but no research has looked at the type of climate that is relevant for motivation. Leaders have the power to control resources and enact behaviours that articulate the desired workplace. As such, transformational leadership can shape the climate (Kozlowski & Doherty, 1989) in ways that can be supportive of individual's motivational and behavioural outcomes (Deci & Ryan, 1985). In this study we use the workplace characteristics model to develop a model whereby transformational leadership impacts on intrinsic motivation via experienced workplace characteristics. The workplace characteristics model describes the attributes of the workplace climate that can support motivation, and draws based from climate, job design and self-determination theory (Karanika-Murray & Michaelides, 2015). Specifically, we argue that transformational leadership will contribute towards creating and sustaining a climate that is supportive of individuals' independence, capability, and connectedness, which define the workplace climate for motivation. From this perspective we hypothesise that the effect of transformational leadership on intrinsic motivation is mediated by these workplace characteristics.

Using data from 2082 participants, 256 workplaces, and 18 organizations, we examined a 3-level Bayesian model of the effects of transformational leadership on intrinsic motivation, mediated by independence, capability, and connectedness-supportive workplace

characteristics. Transformational leadership was measured as a single transformational factor (Rafferty & Griffin, 2004). Motivation was measured as integrated self-regulation (Gagné, Forest, Gilbert, Aubé, Morin, & Malorni, 2010). Workplace climate characteristics were measured as psychological climate using the workplace design questionnaire (Karanika-Murray & Michaelides, 2015).

The data supported our hypothesis for a mediated relationship by independence and connectedness climate, but not for capability climate. Specifically, direct effects on motivation were observed for transformational leadership ( $b = 0.32$ , 95% CrI 0.23 : 0.42), independence ( $b = 0.13$ , 95% CrI 0.07 : 0.18) and connectedness ( $b = 0.22$ , 95% CrI 0.16 : 0.28). Leadership impacted on independence ( $b = 0.49$ , 95% CrI 0.44 : 0.54), capability ( $b = 1.43$ , 95% CrI 1.39 : 1.47), and connectedness ( $b = 0.61$ , 95% CrI 0.56 : 0.65). The indirect effects on motivating were for leadership via independence ( $b = 0.06$ , 95% CrI 0.03 : 0.09) and connectedness ( $b = 0.13$ , 95% CrI 0.10 : 0.17).

The results of this work can help to understand how the behaviours of the most salient individuals in an employees' work environment can shape the climate of the workplace, and how these two aspects of the work context together determine individual motivation. Because the work experience entails the job as well as the workplace and people within it, it is important to understand how aspects of all three impact on work outcomes. Implications for leadership training and workplace interventions are discussed.

### **O108: Predictors and Consequences of Presenteeism: A Qualitative Study of Nurses in Geriatric Settings**

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Introduction: Presenteeism is most commonly conceptualised as attending work despite illness. This contrasts with sickness absence, which involves staying home when ill. The European presenteeism literature predominantly focuses on the antecedents of this behaviour whereas the American literature is often more concerned with related productivity losses. Professions which involve caring for others appear to experience a greater prevalence of presenteeism. The consequences of presenteeism are not limited to productivity loss; the behaviour has also been linked with negative short and long term health effects and future sickness absence. It is thus costly. Positive consequences such as social interaction have also been noted.

The decision between attending work or staying home when ill is influenced by the individuals' perceptions of their illness and other factors. Whilst much research has studied these predictors, the evidence as to their relative roles is inconclusive. Reasons for this include failing to study both sickness absence and presenteeism, inconsistencies in the definition and measure of presenteeism, studies failing to consider different predictors concurrently, and a lack of exploratory qualitative studies. Thus, a comprehensive theory of presenteeism is yet to be presented.

Research questions: What factors do nurses perceive to foster presenteeism and absenteeism when ill? And, what are the consequences of presenteeism and absenteeism, and do nurses' perceptions of these consequences play a role in predicting their decision to attending work when ill?

Methodology: An exploratory, qualitative method was used to investigate the predictors and consequences of presenteeism, as well as the link between the two, among nurses ( $n=18$ ) working within a geriatric hospital ward setting. Data were collected via recorded semi-structured interviews with nurses in their usual place of work. These lasted between 30–60



minutes. The research employed an organisational and biopsychosocial perspective. Questions focused on the reasons why individuals felt obligated or desired to attend or stay home when ill. The consequences of their choices were also discussed. Interviews were transcribed and thematic analysis by means of the Braun and Clarke approach was employed.

**Results:** Four major themes were found to predict nurses' choices between presenteeism, absenteeism, and the consequence of these choices. These included: illness perceptions; work attitudes; organisational factors; and personal factors.

Illness perceptions referred to participants' views and experiences of their own health complaints and contained five sub-themes: illness identity; illness timeline; cure and control; cause of illness; and consequence of illness. Work attitude referred to participants' feelings and behaviours towards different facets of occupational life and contained three sub-themes: attitude towards work and the organisation; attitude towards co-workers; attitude towards patients. Organisational factors referred to workplace factors perceived to influence illness behaviour and contained two sub-themes: the work environment and administrative arrangements. Finally personal factors, which referred to participants' characteristics and personal life included two sub-themes: individual factors; and personal life experiences.

**Conclusion:** Nurses' decision to attend work when ill depends on their: illness perceptions, work attitudes, personal factors, and organisational factors. Further studies are warranted to determine if the identified themes are applicable to the wider study population.

### **O109: Emotion Work and Sickness Absence: A Prospective Study of Employees Working with Clients**

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Emotion work is defined as emotional regulation required to display organizationally desired emotions by the employees. It is a multidimensional construct with both positive consequences, such as job satisfaction or the feeling of personal accomplishment, and negative consequences, such as emotional exhaustion and psychosomatic complaints. Recent studies conclude that emotion work is an important stressor in occupations where social interaction with clients or customers is a substantial part of the job. While there has been an increased attention to emotion work and its health effects, there are few longitudinal studies that have analysed the structure between emotion work and health outcomes.

Sickness absence can be used as an integrated measure of physical, psychological, and social functioning in studies of working population. A broad range of work factors have been investigated and established as antecedents of sickness absence, but few studies have included emotion work as a potential predictor.

The overarching objective of this study was to determine the relationship between emotion work and sickness absence over one year follow-up period. The following research questions were answered:

1. To which degree is emotion work associated with sickness absence?
2. Is the impact of emotion work different for short-term and long-term sickness absence?
3. Is there a unique contribution of emotion work in the prediction of sickness absence when adjusting for other psychological and social work factors?
4. Is the association between emotion work and sickness absence moderated by gender, age, occupation, and education level?

The study design was prospective. Work factors were measured at baseline, and then linked to registry data on sickness absence for the year following the baseline assessment. Participants (employees) were recruited from 48 Norwegian organizations in the time period 2004 to 2014. For the present study a sample of 7,401 employees (57.3% women, 42.7% men, mean age 42.8 years), all working with clients, customers, patients or students, were included. At baseline all respondents answered a questionnaire including the General Nordic Questionnaire for Psychological and Social Factors at Work. Emotion work was measured by items from the Frankfurt Emotion Work Scales. Information on medically verified sickness absence was assessed through the Norwegian registries of state paid benefits.

Preliminary logistic regression analysis showed that a high level of emotion work increased the risk for sickness absence, and the association was stronger for women than men. The association was strongest for employees with 1-3 years of higher education. When separating the employees in different occupation groups (based on International Standard Classification of Occupation), analysis showed that the association was strongest within the occupation group named technicians and associate professionals. This group included nurses, teachers and social workers among others.

The findings of this study show that emotion work is a risk factor for sickness absence. An implication of these findings is that it can contribute to a better understanding of the high sickness absence rates among health and social workers.

#### **O110: Work Engagement and Occupational Sitting Time and Their Influence on Sickness Absence: Results from the Stormont Study.**

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Background: Evidence suggests that high work engagement is associated with lower occupational sitting times (Munir et al, 2015), and low work engagement is associated with long-term sickness absence (Schaufeli et al, 2009; Rongen, 2014). Independently, high occupational sitting has been found to be related to high sickness presenteeism but has not yet been evaluated for its effects on sickness absence.

Building on the cross-sectional findings by Munir et al (2015), the objective of this study is to test the following hypotheses: 1) occupational sitting times and work engagement will (separately) be associated with self-reported sickness absence, 2) occupational sitting time mediates between work engagement and sickness absence.

Method: A cohort of 1000 office-workers from the Northern Ireland Civil Service completed a questionnaire in 2012 and again in 2014. Data on work engagement occupational sitting time and self-report sickness absence were collected (as well as a number of health factors and demographic data). Structural equation modelling (SEM) analysis will be employed to test the hypothesised links between sitting times, work engagement and sickness absence. Missing data will be treated using listwise deletion. In order to evaluate the adequacy of the model, several indexes of fit will be examined: the chi square ( $\chi^2$ ) value, the Comparative Fit Index (CFI), the Non-Normed Fit Index (NNFI), the Standardised Square Root Mean Residual (SRMR), and the Root Mean Square Error of Approximation (RMSEA) with its 90% confidence interval (CI).

Conclusion: Analysis is underway and the findings will be presented at the conference.

## **O111: Exploring the Nuances of Presenteeism at Work across Contexts: A Cross-Country Comparison**

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Background: Employee attendance has received significant research attention for many decades. Research efforts were mainly focused on absenteeism due to its readily observable nature and costs to organizations (Johns, 2010). Nowadays, the attendance construct can be disaggregated to refer to absenteeism and an emerging topic of presenteeism at work. However, scholars have pointed to the area being markedly "atheoretical" and to its development independent to the wide literature on absenteeism (Johns, 2010). A critical review of the literature on presenteeism illustrates many definitions and variability at the conceptual level. The many definitions of presenteeism reflect some disagreement around the core essence of the behaviour, and have varying theoretical implications. It also follows that the different conceptualisations logically allow for different antecedents and consequences of presenteeism at work. Furthermore, the focus remains largely on the antecedents as attendance drivers and less so on the interactions between and within levels of analysis, underestimating the significance of the experiential component associated with the behaviour. Left unaddressed, these issues become problematic for the development of coherent theory, and risk overlooking fruitful avenues for achieving a holistic understanding of presenteeism in the workplace.

The present study is part of a broader research program working towards a multilevel model of presenteeism at work to build on the limited research exploring presenteeism and its emergence across the various levels of analysis (individual, organisational, and societal). We begin with the development of the concept of presenteeism and its emergence at the individual level while also accounting for the broader organisational and societal levels. As such, the present research aims to explore the phenomenological experience of presenteeism across two different country contexts with sharply distinct political, economic, societal and cultural environments (UK and Lebanon). Here, the worker's experience is placed centre stage and the findings are analysed in light of the theoretical critique of the literature on presenteeism.

Method: Semi-structured interviews were conducted with workers from various industries and occupations across both the UK and Lebanese contexts to explore workers' experiences in relation to attendance, health, performance, productivity, and other relevant themes. Participants were recruited by advertising the study online on social media, and using a snowball technique. Each interview lasted about sixty to seventy minutes in duration, and the sample was balanced between males and females with ages ranging from 20 to 60 years. The interviews were audio-recorded and transcribed verbatim.

Results and Discussion: This research is in progress and ends in March 2016. As such, the results will be presented at the conference. We will conclude by discussing the contribution to our understanding of the nuances of presenteeism and its emergence in the contemporary workplace, within the broader notion of employee attendance.

## **O112: Stress, Fatigue and Sleep Quality Leading up to and Following a Stressful Life Event**

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Recovery from stress is argued to be an important mechanism determining whether work-related stress eventually results in ill-health. Sleep is a crucial recovery opportunity, with fatigue being an important indicator of unsuccessful recovery. Very little research has focused on the

time course of stress, fatigue, and sleep quality leading up to and following a significant life-event. Building on the perseverative cognition hypothesis, anticipatory cognitions related to the stressful event may predict this time course. In the present study, we investigated the time course of stress, fatigue and sleep quality among PhD-students who were awaiting a work-related stressful event, i.e. their dissertation defence. We expected that daily stress and fatigue would increase leading up to the defence and decrease rapidly thereafter before going back to baseline level. Regarding sleep quality, we hypothesized the opposite pattern. Lastly, we expected that day-level negative anticipation would be related to increased daily stress and fatigue, as well as decreased daily sleep quality. We hypothesized the opposite pattern for positive anticipatory cognitions.

Forty-four PhD students were followed on eight occasions from one month before the dissertation defence until one month thereafter. Day-level stress and fatigue were assessed with an evening diary, whereas sleep quality and anticipation (positive/ negative/ outcome expectancy) were measured with morning diaries. Data were analysed with repeated measures MANOVAs and multilevel analysis.

In line with expectations, stress increased leading up to the defence following a linear trend. Following the defence, stress decreased rapidly, before slowly increasing again. Contrary to our expectations, fatigue did not increase leading up to the defence but did increase immediately following the defence, and slowly decreased thereafter. Sleep quality did not decrease leading up to the defence, but did improve directly following the defence. During the month after the defence, no additional changes in sleep quality were detected. Post hoc analysis showed that stress levels one month before the defence were already higher than one month post defence. This difference was not apparent in fatigue or sleep quality. Finally, positive and negative anticipation increased before the defence. Day-level stress was adversely affected by negative anticipation and low outcome expectancy, whereas positive anticipatory cognitions had no influence. Fatigue was not influenced by any of the anticipation indicators. Finally, (low) outcome expectancy was an important predictor of reduced sleep quality on the day-level. The other anticipation indicators did not influence sleep quality.

It can be concluded that stress builds up long before a stressful event and accumulates slowly up to the event. After effects appear to be very short-lived as they almost immediately disappear after the stressful event has passed. Fatigue and sleep quality are more robust than stress as they did not change leading up to the stressful event. Even though positive and negative anticipation increase before the stressful event, this does not necessarily predict daily stress, fatigue, and sleep quality. Day-level negative anticipation seems to impact daily stress and outcome expectancy was predictive of both stress and sleep quality.

### **O113: What Makes for a Good Break? Effects of Recovery Experiences During Lunch Break on Afternoon Exhaustion and Work Engagement**

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As work constitutes a substantial share of an employee's day, it is crucial to learn more about what helps employees to replenish their resources throughout the day. In this diary study, we investigate the immediate direct and delayed indirect effects of four recovery experiences during lunch break on afternoon well-being, namely psychological detachment, relaxation, autonomy and relatedness. For recovery to occur, it is important to interrupt resource depletion or to (re-)build resources (Hobfoll, 1989; Meijman & Mulder, 1998). Psychological detachment and relaxation imply a pause of work demands (Kinnunen, Feldt, Siltalooppi, & Sonnentag, 2011) and self-determination theory (SDT; Deci & Ryan, 2000) suggests that satisfying needs

for autonomy and relatedness increases resource levels. Therefore, we propose these break experiences to relate to feeling refreshed immediately after break as measured by a higher state of being recovered. Starting refreshed into one's afternoon in turn should translate into lower afternoon exhaustion and facilitate a positive, fulfilling state while working as captured by higher afternoon work engagement. Combining these assumptions, we furthermore propose indirect delayed effects of break recovery experiences on afternoon exhaustion and work engagement via state of being recovered.

We collected data online over two workweeks with a general questionnaire and three daily surveys (i.e., start of work, after lunch break, end of work). The final sample comprised 109 employees providing data on 538 days. Mean age was 38.7 years (SD =12.0), nearly two-thirds were female (61%).

Multilevel path analysis revealed a satisfactory model fit. At the day-level, relaxation, relatedness and autonomy showed the expected immediate direct as well as delayed indirect effects. Psychological detachment, an important recovery experience for off-work time, showed no relevance for within workday recovery.

Our results contribute to literature on within-day work breaks by (a) investigating generalizability of non-work recovery experiences to the work context, (b) going beyond pure energy-related outcomes, and (c) examining immediate direct as well as delayed indirect effects. Limitations of our study include that we, based on our design, cannot draw causal inferences and that relying on self-report data may enhance risk of common method bias. Regarding practical implications, results suggest that organizations should give their employees autonomy over their lunch break and that employees should utilize this autonomy and try to relax.

#### **O114: Sleep and Satisfaction After Change from 8-hour Slow to 12-hour Fast Forward-Rotating Shift System in Industry**

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**Background:** Extended 12-hour shift systems have gained popularity in industry instead of traditional 8-hour shift systems, although they are known to increase sleepiness and risk of occupational injuries. We investigated the differences between 8-hour and 12-hour forward-rotating shift systems for self-reported sleep duration and difficulties, work-life balance, and shift system preferences in industry.

**Methods:** Shift workers in a paper and pulp industry company answered an online questionnaire in 2014 and after 12 month follow-up (n=90). 37 % of the employees changed from a slow forward-rotating 8-hour shift system (MMMM-EEEE-NNNN-----) to a 12-hour fast forward-rotating shift system (DDNN-----), whereas 37% remained in the 8-hour shift system, and 27% in the 12-hour shift system.

Using the Pearson's  $\chi^2$  -test and variance analysis with gender, shift work experience, self-rated general health and self-rated stress as covariates, we analyzed the difference between 8-h slow and 12-h fast shift systems for shift-specific sleep duration (hh:mm) and sleep difficulties, satisfaction with current shift system and negative effects of shift system on sleep, health and work-life balance.

Results: At baseline, there were no statistically significant differences in the factors of interest between the employees remaining in the 8-hour and those changing to 12-hour shift system. At follow-up, majority of the employees who had changed from 8-hour to 12-hour shift system were satisfied with their shift system (76%), compared to 100% in the 12-hour group, and 27% in the 8-hour group ( $p < 0.001$ ). One third in the 8-to-12-shift system changers reported negative effects of their current shift arrangements on sleep and alertness, compared to none in the 12-hour group, and 79% in the 8-hour group ( $p < 0.001$ ). At least one regular sleep difficulty was reported by 27% in the 8-to-12-shift system changers, by 4% in the 12-hour group, and 46% in the 8-hour group ( $p < 0.01$ ). The 8-to-12-shift system changers and 8-hour group had significantly shorter average sleep duration than the 12-hour group (7:13 and 7:13 vs. 8:02,  $p < 0.01$ ). Also sleep duration before morning shifts was shorter in the 8-to-12-shift system changers and 8-h group (6:20 and 5:10 vs. 7:07 in the 12-h group  $p < 0.01$ ) although the morning shifts in the 8-hour group started one hour earlier than in the 12-hour groups. Night shift sleep was shorter in the 8-to-12-shift system changers (5:22) and in the 8-hour group (5:59) than in the 12-h group (6:31,  $p < 0.01$ ). Shift system was reported to have negative health effects by 18 % in the 8-to-12-shift system changers, none in the 12-hour group and 52% in the 8-hour group ( $p < 0.001$ ). Negative effects on work-life balance were perceived by 33% in the 8-to-12-shift system changers, and 76% in the 8-hour group, but only by 8 % in the 12-hour fast group ( $p < 0.001$ ).

Conclusion: Employees who have shorter experience in the 12-hour shift system differ somewhat from employees continuing in the 12-hour fast forward-rotating system, but are markedly more satisfied with their current shift system, perceive increased work-life balance, and have better sleep quality compared to employees continuing in slow 8-hour forward-rotating shift system.

#### **O115: Take a Good Break: Short-Term and Long-Term Effects of After-Work Activities on Detachment and Sleep Quality**

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Introduction: Off-job time temporarily relieves employees from their work-related efforts, and offers opportunities to engage in different types of after-work activities. However, the jury is still out on the issue what kind of after-work activities will lead to a good break; that is, better recovery (cf. Demerouti et al., 2009).

The present study examines short-term and long-term effects of after-work activities on two recovery indicators; i.e. detachment and sleep quality. It has been well-established that high detachment from work and good sleep quality have many benefits, and affect employees' health, well-being and performance.

Using the Effort-Recovery Model (Meijman & Mulder, 1998) and the Demand-Induced Strain Compensation Recovery (DISC-R) Model (De Jonge et al., 2012) as theoretical frameworks, and based on a review of Demerouti et al. (2009), we hypothesize that:

1. Off-job time spent on work-related and household activities would be negatively associated with detachment and sleep quality;
2. Off-job time spent on social, physical, creative and passive activities as well as taking a nap would be positively associated with detachment and sleep quality.

Since we expect that after-work activities are based on rather stable behavioral patterns, we also hypothesize that short-term and long-term effects of after-work activities are equal (Hypothesis 3).



**Method:** A two-wave panel survey (2-year interval) was conducted in a Dutch general hospital. Healthcare employees within four different departments received an email with a unique link to an online survey, which was linked to the employees' email addresses for second-round identification. The final panel consisted of 230 participants (41% response rate). Demographics showed that all of them were female (mean age = 44 years; SD=11).

**Results:** In line with Hypothesis 3, we analyzed short-term (cross-sectional) results and long-term (longitudinal) results. Cross-sectional hierarchical regression analyses controlling for demographics showed that work-related activities were negatively related to both cognitive and emotional detachment, while passive activities were positively related to cognitive detachment. However, no type of after-work activities was related to physical detachment. These findings were replicated in the long-term analyses (but for the passive activities). Further, short-term analyses showed that no type of after-work activities was related to sleep quality. However, long-term analyses showed that active activities such as sports, walking and biking were negatively related to sleep quality, whereas household activities were positively related to sleep quality.

**Discussion:** Our findings built on earlier empirical evidence that work-related activities during off-job time inhibit cognitive and emotional detachment from work. These activities could lead to resource depletion and increase strain, which inhibit recovery. Furthermore, sleep quality was negatively predicted by active activities and positively predicted by household activities, but only in the long run. Appearingly, too much physical activity after work may inhibit sleep and affect its quality. Contrarily, healthcare employees may experience household activities as positive which help them to disengage from work-related strains and, hence, sleep well. To conclude, this panel study increases our understanding of which after-work activities are playing an important role in employees' detachment and sleep quality in both the short and long run.

#### **O116: The Role of Poor Sleep in the Relation Between Workplace Bullying/ Unwanted Sexual Attention and Long-term Sickness Absence: A Longitudinal Study**

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**Objective:** While exposure to bullying and unwanted sexual attention was previously found to increase the risk of sickness absence, the underlying mechanisms are largely unknown. Poor sleep can be a consequence of stressful exposures and a cause of poor health, and poor sleep is also a determinant of insufficient recovery. Therefore, the present study investigated whether poor sleep mediates and/or moderates the association between bullying and unwanted sexual attention, on the one hand, and long-term sickness absence (LTSA), on the other hand.

**Methods:** We used questionnaire data from 7650 individuals contributing with 15,040 two-year observation periods. Workplace bullying, unwanted sexual attention, disturbed sleep, and difficulties awakening were measured at three time points, and participants were followed in registers to measure the occurrence of LTSA, defined as  $\geq 30$  consecutive days of sickness absence during the subsequent two years.

Results: The odds of LTSA were significantly increased by workplace bullying (OR=1.77; 95% CI: 1.50-2.12) and unwanted sexual attention (OR=1.55; 95% CI: 1.06-2.29). Together, disturbed sleep and difficulties awakening mediated 12.8% (95% CI: 8.1-19.8%) of the association between bullying and long-term sickness absence, and 8.5% (95% CI: -0.45-37.1%) of the association between unwanted sexual attention and long-term sickness absence. Neither disturbed sleep nor difficulties awakening moderated these associations.

Conclusion: As expected, bullying and unwanted sexual attention were prospectively associated with long-term sickness absence. Only a small part of this association was mediated by poor sleep.

### **O117: Return to Work after Cancer: Implications for Occupational Health and Safety.**

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Background: Cancer is a worldwide problem with an estimated 14.1 million adults globally being diagnosed with some form of cancer in 2012. As the prevalence and survivorship rates for cancer are increasing, more people are aiming to successfully return to work. The impact of chemotherapy-related psychological side effects on quality of life and work ability are well documented, however the impact of cancer treatment on safety outcomes has currently been overlooked. Therefore, there is an urgent need for research to explore the work-related safety implications for those working or returning to work following a diagnosis of cancer.

Method: An in-depth review of the literature was undertaken to identify factors which potentially impact on those returning to work after cancer. Specifically the review addressed the following research questions:

- What factors influence the return to work after cancer in relation to occupational health and safety?
- What evidence is available on workplace changes, adjustments and other mechanisms to support return to work after cancer in relation to occupational health and safety?

The criteria for the review included papers published in English since 2000. Peer review and grey literature was included. Through the review process, 17 papers met the inclusion criteria and were included in the review. Data extraction was undertaken independently by six reviewers with each paper being reviewed twice by different pairs of reviewers. A quality evaluation of each paper was also carried out using an adapted version of the Effective Public Health Practice Project (EPHPP) quality assessment tool for quantitative research which included, where applicable, an evaluation of data collection methods, selection bias, study design, confounders, blinding, withdrawals and dropouts, intervention integrity and analyses.

Results: A number of issues were identified through the review which influence the return to work process for cancer survivors and which impact on their health and safety. These include the physical demands of work, fatigue, and work ability. The review has highlighted that there is a lack of evidence on the occupational health implications of working after cancer and the role of health and safety factors in supporting or impeding the return to work process. Although work-site adjustments and flexibility in work have both been recommended as a means of improving the return to work process for cancer survivors, there is little detail and information in relation to best practice in this process. There is a need for greater consistency and approach to the management of occupational health and safety for cancer survivors in the workplace.



## **O118: National Strategies for Psychosocial Factors at Work: Lessons Learned from the Australian Workplace Barometer**

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Until recently each different state in Australia set their own laws in relation to health and safety practices at work. In 2012 a model Workforce Health and Safety (WHS) Act was implemented throughout Australia clearly stating that employers are responsible for providing a “working environment that is safe and without risk to health” (Safe Work Australia, 2012a p.7). This definition of ‘health’ encompasses both the ‘physical’ and ‘psychological’ health of workers (Safe Work Australia, 2012a, p.4). If these requirements are not met, Australian employees are legally covered by a worker’s compensation system should they suffer injury or illness at work, entitling them to seek financial compensation, recover health costs, and receive rehabilitation. Therefore, it is in the financial interests of employers to conduct risk assessment at the organisational level to meet their legal requirements, and for governing bodies to conduct regular surveillance of risks and hazards at the industry, state, and national levels for the purposes of injury prevention and intervention.

In the 2008-2009 financial year, workplace injuries were estimated to cost AUD\$60.6 billion per annum or 4.8 per cent of Australia’s gross domestic product (GDP; Safe Work Australia, 2012b). Compared to other kinds of compensation claims, such as those from physical injury, the claims made in relation to stress have one of the highest average costs with median payments of AUD\$20 400 in the 2009-2010 financial year compared to AUD\$8 200 overall median costs for all serious claims (Safe Work Australia, 2013). With the abundance in evidence linking work contexts to both physical and mental health (Leka & Jain, 2010) it is not surprising that national policies that are directed at improving employee health and wellbeing are attempting to incorporate work-related psychosocial factors.

Best practice in this field states that psychosocial factors need to be regularly measured so that risks can be targeted for prevention and hazards can be identified for intervention (Houtman, Jettinghoff, & Cedillo, 2007). The Australian Workplace Barometer (AWB) is a national workplace monitoring system that has collected several waves of data on working conditions for over 7000 Australians between 2009 and 2015. It identifies a wide range of psychosocial factors that impact on people’s wellbeing and effectiveness at work, such as Psychosocial Safety Climate (PSC), job demands, control, resources and supports, bullying and harassment, and work life balance in addition to a range of health and productivity outcomes.

The results from the AWB have been used in a variety of forums beneficial to academics, industry regulators, and practitioners. Outcomes have included peer reviewed publications, reports to authorities, identification of high risk industries, and demonstration of how psychosocial hazards are having a detrimental impact of employee health and productivity. For example, workplace bullying is showing a steady increase over time across most Australian states and is linked to a range of poor health and productivity outcomes including sickness absence and depression. The results from AWB data collections provide an evidence basis for theoretical advances as well as practical implications for national policy and interventions.

## **O119: How do Employees Notified with a Work-Related Mental Disorder in the Danish Workers Compensation System Experience the System?**

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**Introduction:** Strains deriving from a poor psychosocial work environment represent major challenges in both Danish and European occupational contexts, as they lead to sickness absence and a poor quality of work. An increasing number of employees are notified with a mental disorder in the Danish Workers' Compensation System (WCS). However, less than 5% are recognized and even less are granted a compensation. Research shows that notifications of an occupational disease increase the risk of work disability (WD). However, research exploring workers' experiences of the WCS and what factors can lead to and protect against WD is lacking, with only few studies focusing explicitly on notifications of mental disorders.

**Method:** The study applies a mixed-method approach. Data consisted of 11 interviews with a notified work-related mental disorder in the National Board of Industrial Injuries (NBII). Furthermore, 7 interviews were conducted with employees with a work-related mental disorder who chose not to notify and 9 group interviews with healthcare professionals from all Occupational Medicine Departments in Denmark. Using Nvivo 10, interviews were transcribed verbatim and analyzed thematically based on open and selective coding and memo writing. Qualitative findings were tested in a questionnaire survey completed by 433 employees notified with a mental disorder in the NBII.

**Results:** The WCS was experienced by employees as developed to specifically address physical diseases. Questionnaires were hard to fill out, and items addressing the psychosocial work environment were missing. Communication from NBII was lacking, and procedure and timelines unclear. Employees' goal when notifying was not to achieve economical compensation but that their disorder was recognised as determined by the work environment. They hoped a notification could draw attention to the negative working conditions and prevent others from getting sick. Employees saw rejection by the NBII as though their experience and severity of disease were neglected, placing responsibility and blame on the individual. Results also indicate that an employee's motivation to notify a work-related mental disorder was mainly stimulating primary prevention at the workplace, and the notification was often encouraged by unions and health care professionals involved. However, employees report that inspections from the Working Environmental Authority occurred only rarely, with often no workplace interventions taking place. They thus feel that their efforts, including time and resources, were wasted. Further, the study identifies a gap between the definition of work-related mental health disorder by the healthcare systems and the NBII.

**Conclusion:** These results indicate that there is a need to improve the Danish WCS to secure a system that supports rehabilitation and attachment to the labor market. The study shows how multiple factors can be addressed to improve the WCS.

## **O120: Applying the DPSEEA Framework to the psychosocial work environment**

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**Introduction:** The DPSEEA (Driving Force Pressure Exposure Effects Action) Framework was developed with a view towards assessing environmental health risks, and identifying actions for preventing and/or managing such risks at various levels. Rather than looking at exposures and effects, the framework considers the complex relation between policy needs, social and economic determinants, exposures and effects. This framework also allows for comparative risk assessment of exposures emanating from the same driving force, which, in turn, permits

the selection of actions to address the more relevant exposures or, preferably, actions that might address several health risks at the same time.

**Methods:** Health at the workplace is an area to which the DPSEEA Framework could be applied. The advantages of such an approach are threefold: First, potential actions to prevent hazardous work environments and protect workers health can be better explored and communicated, showing the extent to which actions at different levels could be effective. Second, the framework allows for a comparative assessment of various risks emanating from the same driving force; this provides a possibility for prioritization of actions. Third, using this framework that has been employed to assess environmental risks opens up the possibility for comparing occupational to environmental and other risks and may allow for addressing health outcomes in the environment and at the workplace through integrated actions.

**Results:** This presentation will describe how the DPSEEA model could be applied to the psychosocial work environment.

**Discussion:** It is hoped that this application will showcase how comprehensive approaches such as the DPSEEA model can be applied in a multidisciplinary fashion to promote good practice in areas beyond environmental health and the lessons that can be learned in the process. It will also identify the way forward in terms of research and practice.

#### **O121: Extending Working Life - Health Professionals Late Career Transitions, a Demographic Time Bomb for the UK's National Health Service?**

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The recently introduced increases in pension age for UK National Health Service (NHS) employees (rising to 68 years by 2028) sponsors the intuitive conclusion that this will result in people working longer and retiring later. While this is likely to be the case for a proportion of employees, there are grounds for speculating that this may not be the outcome for a large proportion of NHS workers. Our reasons for believing this are based on an analysis of NHS age demographics and employment migration patterns, using a sub-set of data from the UK Office for National Statistics (ONS) Labour Force Survey (the Annual Population Survey - APS, and the five-quarterly longitudinal 5QLFS), for the period 1993-2012. The APS produces an annual sample of 4,100-4,200 NHS employees. This analysis, commissioned by the tripartite NHS Working Longer Review Group, revealed an established trend of a large proportion of employees leaving the NHS significantly before their pension date, a process that begins from about age 50 years onwards. A high proportion of this group continue in employment outside the NHS. It also revealed that NHS employees have a relatively high, and rising, mean age (currently 43 years), around four years higher than the private sector. The mean for some professions is appreciably higher than this (e.g. 48 years for paramedics). If the established pattern of early withdrawal continues, in the context of a rising mean age, there is a risk that the NHS will experience significant labour shortages within a decade. The paper discusses what is known about the choice architecture of push and pull influences associated with early withdrawal, the post-NHS employment destinations of those who leave, and the scope for employer intervention to increase rates of retention of older health professionals. Findings are discussed with reference to contemporary perspectives on employer good practice to support extended working life.

## **O122: Early Identification and Prevention of Major Depression in Canadian Male Workers**

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**Background:** There is a pressing need for innovation in prevention of major depression in male workers. Major depression (MDE) affects workers' health and productivity. In the workplace, risk factors for having MDE differ for men and women. Compounding men's risk, men are less likely than women to seek help and to disclose depressive symptoms and often delay help seeking until symptoms become severe. Men are socialized to be emotionally stoic and exemplify traditional masculine characteristics such as independence, self-reliance and dominance. Men are concerned over the perceived negative judgments from family and friends if they access treatment for depression. These gender specific experiences along with a limited knowledge base about effective interventions call for innovative solutions tailored for men. The objectives of this presentation were to (1) describe the methodology of a research program on early identification and prevention of MDE in male workers who are at high risk of having MDE, and (2) present the results of preferred design features of e-mental health program by high-risk male workers.

**Methods:** This is a national wide study, including three interrelated research projects: (1) a national survey on preferred design features of e-mental health program in high-risk male workers; (2) a randomized controlled trial on the effectiveness of e-mental health program; (3) development of an open access educational resource for male workers. High-risk male workers aged 18+ were recruited and interviewed via telephone. Internet use and preferred design features of e-mental health program were compared between high-risk and low-risk groups, overall and by age categories.

**Results:** A majority of male workers used internet for personal use and over 60% of high-risk male workers used internet for medical or health related information. Over 84% reported that it was important for them to access health resources on the internet. The top design features likely to be used by high-risk male workers included information about sleep hygiene, practice and exercise, educational materials, setting personal goals, referral, and monitoring and prediction tools.

**Conclusions:** E-health programs have attracted increasing attention in prevention of mental health problems because of its anonymity, accessibility and sustainability. A large proportion of male workers are likely to use e-mental health program. However, to enhance the use and effectiveness of the program, the design features should meet their specific needs.

## **O123: The Moderating Effect of Emotional Intelligence on the Relationship between Supervisor Conflict and Employees' Counterproductive Work Behaviours: A Longitudinal Study**

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**Objectives:** Research indicates counterproductive work behaviours (CWBs) are fairly common in organisational settings and cost business billions of dollars each year (Vardi & Weitz, 2004). Supervisor conflict has negative impact on employees' behavioural strains, and could result in

CWBs thereby. Previous studies examined the relationships between CWBs and supervisor conflict frequency rather than intensity (e.g., Bruk-Lee & Spector, 2006). Thus, the first purpose of this study was to examine how supervisor conflict (intensity) was related to CWBs. Research suggested that negative emotions played important roles in job stressor-strain relationships (Fox, Spector & Miles, 2001). Since emotional intelligence (EI) determines one's effectiveness in perceiving, understanding, regulating and applying emotions (e.g., negative emotions), we predicted that people with high EI might be more sensitive to their negative emotions, manage it more effectively, and thus be less likely to engage in CWBs. The second purpose of this study was to examine whether EI dimensions (i.e., self emotion appraisal and other emotion appraisal) would buffer the relationship between supervisor conflict and CWBs.

**Methods:** Using a longitudinal survey design, we collected 127 employee-coworker matched data from Chinese university employees. We assessed supervisor conflict (6 items) using the Cross-Cultural Interpersonal Conflict at Work Scale (Liu, Nauta, Spector, & Li, 2008). We measured SEA (4 items) and OEA (4 items) using subscales of the Wong and Law's (2002) Emotional Intelligence Scale. We measured CWBs towards the organisation (CWB-O, 12 items) and CWBs toward the individual (CWB-I, 7 items) using Bennett and Robinson's (2000) scale. Employees completed scales measuring supervisor conflict, SEA, and OEA at Time 1. Coworkers filled out the CWB-I and CWB-O scales using the target employees as referents at both Time 1 and Time 2.

**Results:** Supervisor conflict measured at Time 1 was not significantly related to CWB-I and CWB-O measured at Time 2. Hypothesis 1 was not supported. As expected, we found supervisor conflict interacted with EI in predicting CWB-I and CWB-O measured at Time 2. Simple slope analysis demonstrated that the supervisor conflict-CWBs relationships were stronger for employees with low EI than employees with high EI.

**Discussion:** Our results supported the predictions that employees' emotional intelligence helped them cope with supervisor conflict in a less destructive way. High-EI employees were less likely to deviate from organisational norms after experiencing conflict with their supervisors. Emotional intelligence may be an important ability for employees to improve upon in order to effectively cope with workplace conflict, especially those that come from one's superiors. Our study contributed to the existing literature in two fold. First, our study provided a more sophisticated map in interpreting the relationship between supervisor conflict and CWBs. Second, this was one of the few studies (Bibi, Karim & Din, 2013; Jung & Yoon, 2012) that examined the individual dimensions of EI.

#### **O124: Work-Related and Personal Factors and Skills Affecting Self-Esteem in a Nation-Wide Sample of 3.668 Greek Teachers**

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**Introduction:** Self-esteem has been widely recognized as a factor of critical importance for individual's success in work and in life. Several measurement tools have been designed in order to assess it, with Rosenberg's Self-Esteem Scale (RSES) being a globally well-established one. The aim of the presented study was to identify individual and work-related characteristics that affect teachers' self-esteem, and highlight the existing correlations.

**Methods:** 3668 educators of all levels and specialties took part in the cross-sectional study, after being informed through an e-campaign posted on the official and the main teachers' portals in Greece, and after voluntarily completing the study's questionnaire which included

demographic, personal and job related items, and also the RSES. Data were electronically collected and multiple linear regression was used in order to investigate possible associations of study variables with Self-esteem.

Results: Sample consisted of 1030 male and 2638 female teachers with mean age 43.4 years ( $SD=8.7$ ). The mean score for Self-esteem subscale was 44.4 ( $SD=5.9$ ) and the scorings ranged from 10 to 68. Multiple analysis for Self-esteem, including demographics and job related characteristics as independent factors, revealed that female educators had greater levels of Self-esteem. Also, increased age and marriage was found to be associated with lower Self-esteem. Additionally, the Self-esteem subscale score was greater in those with higher educational level. Furthermore, a significant correlation was found between Self-esteem, Locus of Control Scale (LOC), Problem Solving Inventory (PSI) and Emotional Intelligence (WLEIS) subscales.

Conclusion: Self Esteem is influenced by personal and job-related characteristics, and also by socioemotional skills like emotional intelligence, problem solving and locus of control. Since its importance is crucial for individuals' well-being in work and in life, it is of great significance that ways for its enhancement -not only in students but in their educators also- should be sought.

#### **O125: Emotional Intelligence and Wellbeing: A Study of Young Adults working in a Voluntary Organization in Delhi**

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A study was carried out to find out the relationship and its significance between Emotional Intelligence and Well-being. The sample selected was 90 young adults working in the world's largest youth run organization's Delhi branch. The sample was selected based on the incidental sampling method. The age ranged between 18-21 years. EQ Questionnaire by N.K. Chadha and Wellbeing Scale by Philip H. Friedman were administered on the sample. It was found that there exists a significant positive correlation between Emotional Intelligence and Well-being amongst the young adults. With the increase in choices for both workers and organizations, the stress levels have also increased. As a result, organizations focussing on increasing loyalty and well being of employees will benefit by assessing EQ levels of employees. The implication of this study directs managers to develop processes in organizations where assessment and management of EQ levels (through selections, induction and training) of the young adults is emphasized since that would bring about well-being in their career and personal lives. This in turn shall be of significant benefit to the organization's productivity and growth.

#### **O126: Change within a UK Fire and Rescue Service: Assessing the Impact on Firefighter Wellbeing and Performance**

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Background: UK Fire and Rescue Services (FRS) face challenging decisions regarding service delivery. Demand from emergency incidents has reduced in recent years but there is an expectation for services to maintain responsiveness. Day Crewing Plus (DCP), where personnel 'live-in' station with considerable time away from home, requires 50% less personnel than the traditional shift pattern with no reduction in cover. This offers an attractive alternative system for service delivery. Within other uniformed services the interference of work in family life affects operational effectiveness and wellbeing. This research addresses whether the introduction of DCP impacts on work wellbeing and performance within the FRS.



**Method:** A longitudinal mixed methods study assessing the impact of the introduction of DCP on wellbeing and operational performance. 45 individuals were interviewed (8 Watch Manager, 7 Crew Manager, 30 Firefighter), from a total population of 64, who were deployed to the new shift system at four fire stations in a typical county of the UK. A semi-structured interview technique was used at three time points; pre-changeover, at transition and 12 months post change. These findings are being triangulated with survey data accessing work wellbeing, work engagement, work confidence, work-life balance and job performance along with operational performance data at a station level.

**Analysis:** One fire station's data was used as a pilot for initial analysis chosen because DCP was introduced in its most simple form with fewer external influences. Inductive Thematic Analysis highlighted some early themes. Proactive job behaviours have emerged from the changeover to DCP. These have been explored in terms of Job Crafting behaviours. Individual identity as firefighters has been enhanced through increased exposure to operational incidents. There has been a move towards a collective identity as "one big watch" away from the traditional four watch system. Person-job fit is highlighted as important within DCP. To develop this project, a deeper analysis of participants across the four fire stations is taking place. This will provide an interpretation on the experience of working DCP from a variety of perspectives, highlighting convergence and divergence of experience using a qualitative framework. These findings will be presented within the paper. Operational performance data is also currently being analysed and will provide useful commentary to the qualitative data.

**Discussion:** Participant interviews allow for a greater depth of understanding of DCP than questionnaire/operational performance data alone. The study design allows all three methods to paint a rich picture of the introduction of DCP and its impact on work wellbeing. The longitudinal nature of the research design has allowed the researcher to track the impact of the change process, on the individuals, as the process of DCP matures. Findings from this study will provide FRS managers with research on the impact of introducing DCP as an alternative model of cover. This will allow for a better informed choice of model cover and if utilised, improve future DCP implementations. For researchers in this field, this study provides insight in to the impact of a change in working life on individual wellbeing.

### **O127: Fathers in the Contemporary Family: Exploring the Emotive Content of Work-Life Balance**

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This mixed-method study investigated fathers' roles and their work-life balance (WLB) experiences in contemporary family environments. Study 1 drew from quantitative data collected from a broader project across Cyprus, Germany and Ireland with 99 child-parent dyads to investigate perceptions of parental responsibilities. Each dyad was presented with one of four vignettes in which either a mother or a father had to stay home to care for their unwell child. Participants were asked whether the situation was fair and to explain their reasoning. Although both the children's and their parents' gender attitudes were related,  $r(87) = .27$ ,  $p = .01$ , their judgements on the vignettes were not,  $r(87) = .13$ ,  $p = .23$  as children perceived it as more unfair when the father stayed home with the unwell child. Reasoning of second-shift parenting also differed between children and their parents. Follow-up ANOVAs showed that children were more likely to appeal to morality when fathers ( $M = .45$ ,  $SD = .51$ ) rather than mothers ( $M = .25$ ,  $SD = .44$ ),  $F(1, 86) = 3.97$ ,  $p = .04$ , partial  $\eta^2 = .04$ , stayed home. Parents were more likely to appeal to gender when mothers ( $M = .56$ ,  $SD = .50$ ) rather than fathers ( $M = .24$ ,  $SD = .44$ ),  $F(1, 87) = 10.08$ ,  $p = .002$ , partial  $\eta^2 = .10$ , stayed home. Therefore, maintained gender-based expectations were found to influence parents' and children's perceptions of WLB decisions.

In Study 2 in-depth interviews with nineteen Greek-Cypriot fathers were conducted and data was analysed using thematic analysis. Findings elucidated again gender-based behaviours in fatherhood (e.g. male chores) and employment (e.g. as breadwinners, several fathers had more than one job). Focus was on paternal guilt where the majority of fathers said that children's complaints for not spending time with them would have made them feel guiltier than not being able to provide them with material goods. The findings highlight the emotive component of parenting, with implications for care giving and paternal well-being, even in a traditionally patriarchal society. Another intriguing finding was that fathers differed in how they experienced work-family guilt. For some fathers being the provider helped them rationalise their absence from home and made them feel less guilty whilst for some others this breadwinning role was a hard demand directly linked to work-family guilt emotions.

It needs to be emphasised most of the interviewed fathers were blue-collar employees which influenced the outcomes of the study. Fathers with lower-skilled jobs (and income) claimed that they were working longer, "sacrificing" and stressing themselves, as the only way to provide for their children.

The findings contribute to our understanding of how families navigate work-life decisions and how fathers are perceived in the contemporary family, especially in the current difficult economy. The present study suggests that WLB literature should focus more on fathers who are vacillating between their breadwinning role and their increasing need to contribute to their children's caretaking. It also reveals how hardship impacts WLB experience, with far more reference to the emotive content of WLB than in previous studies, given the potential implications for well-being.

### **O128: How Job Demands and Social Comparison Orientation Influence Work-Family Conflict and Work Engagement: A Moderated Mediation Model**

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The negative consequences of high job demands on well-being are well-known. High job demands implies a loss of time and energy which in turn can impact on work-life conflict experiences and negatively impact on individuals' well-being. Some individuals tend to compare with others for self-evaluation and self-improvement (Gibbons & Buunk, 1999). Under stressful situations, individuals with high social comparison orientation might actively cope with it. In doing so, they cognitively distance themselves from such others to avoid evaluating themselves unfavourably (Buunk & Gibbons, 2006). Building on the Job Demand-Resource Theory (Bakker & Demerouti, 2014), we hypothesized that individuals' social comparison orientation (SCO), as a personal resource, will moderate the indirect effect of job demands on work engagement through work-life conflict experiences. A cross-sectional study was conducted with 506 Spanish nurses. PROCESS Hayes (2013), a macro for SPSS was used to test simple mediation and moderated mediation. Results provided empirical support to the moderated mediation model. We found that the indirect effect of job demands on engagement via work-life conflict occurred in nurses only with lower levels of SCO. However, this indirect effect was not statistically significant in nurses with higher SCO. Our findings suggest that, under stress situations, SCO is able to mitigate the negative outcomes in terms of work-life conflict experiences and work engagement.



## **O129: Managing Competing Responsibilities: Army Reservists and their Work-life Balance**

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Research on work-life balance has in the main focused on increasing working hours, work intensification, the casualisation of employment and the blurring of boundaries between home and work lives that has transpired as a result of technological advancement (Kossek and Lambert, 2005). However, less research has focused on the work-life-balance of individuals who contend with competing roles from other types of paid work, as well as family roles. In this paper we focus on army Reservists who are increasingly being utilized by the British Army following the 2010 Strategic Defence and Security Review. In addition to their military role, the majority of Reservists also have competing demands from their primary civilian employment and family roles. Thus, the purpose of this Economic and Social Research / UK Ministry of Defence funded study is to investigate these competing roles and explore the interface among additional and simultaneous responsibilities associated with military service, civilian employment and family life. We draw upon an ecological systems approach (Bronfenbrenner, 1989) as a framework for conceptualising the nature and likely implications of Reservists involvement in simultaneous roles. The framework provides an approach to understand the interactions between roles that exist beyond the two archetypal concerns of work-life balance theory, namely primary employment and family.

This research adopts a qualitative approach, utilising both focus groups and semi-structured interviews. Data will be analysed using thematic analysis. Preliminary findings will be discussed in terms of the multiple and simultaneous roles and responsibilities of army Reserves. The implications for practice and research will also be considered.

## **O130: Take a Break - Be Engaged!**

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**Purpose:** The purpose of this study is to show that taking short breaks at work fosters work engagement. Being work engaged, that is, being vigorous at work, dedicated and absorbed into the task at hand, calls for sufficient job and personal resources (Bakker & Demerouti, 2007). Restoration of personal, energetic resources can take place both during short breaks from work (Zacher, Brailsford, & Parker, 2014) and during non-work time (Sonnentag, Binnewies, & Mojza, 2008). Having successfully restored energetic resources should enable employees to show high engagement at work. We thus propose that on days employees restore their resources during short breaks from work, they should be more engaged than on days without short breaks from work. Additionally, we take into account employees' day-specific sleep: On days employees successfully recovered during sleep, they should be more engaged than on days with impaired sleep.

**Design/Methodology:** This daily diary study was realized with 107 employees who provided data twice a day (before lunch and after work) over five working days (453 days in total).

**Results:** Multilevel-regression analyses showed that short recovery breaks during work as well as recovery during non-work time (sleep) was beneficial for employees' daily work engagement: Taking self-initiated short breaks at work in the afternoon boosted daily work engagement, while short breaks in the forenoon failed to predict work engagement. Moreover, on days employees slept better and longer, they indicated more work engagement.

Limitations: It needs to be pointed out that results are limited to employees with jobs that provide the opportunity to take short breaks from work.

Research/Practical Implications: We suggest that employers should allow employees to self-initiate short breaks from work. On days employees need to be particularly engaged, they should not refrain from taking short breaks from work, especially in the afternoon.

Originality/Value: This study contributes to research on employees' effective self-regulation at work with respect to the management of energetic resources.

### **O131: Does the Application of Character Strengths at Work Mediate the Relationship between Work Characteristics, Work Engagement, and Mental Health?**

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Findings in the field of Positive Psychology provide empirical evidence for a positive relationship between the application of individuals' character strengths at work and positive work-related experiences (Harzer & Ruch, 2013). Character strengths are morally and positively valued traits representing human virtues, and thus generally contribute to well-being and health (Peterson & Seligman, 2004). However, there is no empirical research investigating whether established work characteristics are able to increase employees' opportunities to applicate their individual character strengths in their work settings. The objective of this study is to focus on this research gap by examining the role of applying character strengths at work in the field of Occupational Health Psychology.

We therefore hypothesise that (1) work-related resources (autonomy, social support) and challenging work demands (cognitive demands) positively predict the application of character strengths at work. Moreover, considering the outcomes of applying character strengths, we (2) propose that the application of character strengths mediates the relationship of work-related resources and cognitive work demands predicting work engagement and mental health.

The data collection for this study is part of a larger research project, aiming to detect new resources for well-being and health of hospital physicians in training from a longitudinal perspective. We collected data among N=130 hospital physicians in training via an online questionnaire and analysed it by multiple regression with bootstrapping.

The results of the cross-sectional data analysis from T1 show that (1) work-related resources and cognitive work demands predict the application of character strengths at work and (2) the application of character strengths mediates the relation between the predictors and work engagement as well as mental health, supporting our hypotheses. We thus conclude that it is well worth to have a further look on established work characteristics and the application of character strengths as new resources for humane workplaces in challenging working conditions (e.g. hospitals). The presented preliminary results strengthen the role of character strengths in the field of Occupational Health Psychology and intrigue to further findings of our upcoming data collection T2 in fall 2015.

### **O132: Work Engagement and Service Performance in the Irish Motor Industry. A study of Critical Outcomes in a Service Environment and the Role of Human Resource Practices**

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This study examines the impact of high involvement work systems (HIWS) and service climate on employee outcomes of work engagement and employee service performance. The research is built on a quantitative survey of participants from all areas of the Irish motor industry (n=192). The industry comprises of a large number of small and medium enterprises. The SME sector is a key pillar of Irish private sector employment and the present study contributes to an under researched sector in academia.

This research responds to recent calls to integrate the HR and employee engagement literature. Albrecht, Bakker, Gruman, Macey and Saks (2015) argue that in order to deliver the proposed benefits of engagement, it needs to be embedded within an integrated system of HRM policies, practices and procedures (Guest, 2014). The research found a positive relationship between HIWS and work engagement. The study also extends climate literature by identifying a correlation between service climate and work engagement.

In service settings employees add to service quality and as a result customer cognitions, attitudes, and intentions. Therefore, practices that derive positive customer service performance are crucial to a firm's economic success. This present study also identified a positive relationship between HIWS and employee self-rated perceptions of service performance, therefore extending the literature into a service/retail sector as called for by Batt (2002). The well-established link between service climate and service performance was presented in the context of the Irish motor industry.

This research has built on related studies and identified Psychological Empowerment as a mediating mechanism in the relationship between HIWS and Work Engagement. Similarly, this research project has also identified Psychological Empowerment as an important mediating factor in the relationship between Service Climate and Work Engagement.

The research calls for further research in both the SME and service arenas with respect to the topics of HIWS, Service Climate, Psychological Empowerment, Service Performance and Work Engagement. The research concludes by stating that in order to fully understand the complexities of achieving individual and organisation performance, the research model proposed should be extended to incorporate subsequent performance variables.

### **O133: Success of Interdisciplinary Collaborations**

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More and more frequently the complexity of our world's problems can only be resolved when integrating approaches from different scientific disciplines. Therefore in our changing times many employees are challenged by working in interdisciplinary teams. Against the expectations, interdisciplinary projects do not always tap their full potential and stress their employees with typical problems. Increasing team diversity aggravates communication or selection of appropriate work methods and can constitute a burden for the team members. Although currently this topic is of particular interest, there are only few empiric studies regarding processes and success factors in interdisciplinary projects. According to Bronstein's model of interdisciplinary collaboration the professional role, structural and personal characteristics and a history of interdisciplinary experience are crucial. This study tests these

assumptions by investigating which cooperation are seen as successful and what role do proximity and distance between the collaborating disciplines as well as personal and contextual factors play.

Data of N=288 interdisciplinary working individuals out of two online studies were analyzed. Beside their own discipline, participants were asked about all former interdisciplinary collaborations including the partner's discipline, the project duration and a rating of the collaboration's success. Furthermore, personal and structural characteristics were surveyed. In sum N=744 collaborations were analyzed.

Results show, that cooperation within the own disciplinary category (according to OECD classification) were rated as more successful. No main effect of category emerged. Collaboration with a specific category seems not to be a success factor but the proximity or distance between the collaborating disciplines (rated by Biglan's model) were. Furthermore, personal characteristics namely interdisciplinary competences and work engagement have a positive influence on collaboration success. Contrary to the literature, structural characteristics, like a project's length, had no effect as well as the discipline's orientation towards application or a history of interdisciplinary experience.

This study tests for the first time theoretical assumptions about interdisciplinary collaborations empirically. Results help understanding the success factors in interdisciplinary collaborations and help designing successful projects and reduce strains for employees in these working settings.

### **O134: Do Demands and Resources Faced by Doctors' Working Conditions Influence Quality of Care Provided? A Systematic Review**

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The demanding nature of working in the healthcare sector, and its corresponding effect on worker health and wellbeing, is well documented in the research literature. Within the same literature, what is less clear is how doctors' exposure to psychosocial hazards influences the quality of care provided. This is despite numerous reports advocating improving working conditions for doctors as part of patient safety and quality improvement initiatives. This systematic review, therefore, addresses this observable gap in the literature by: (i) examining the types of psychosocial working conditions faced by doctors; (ii) the impact of these working conditions have on different types of quality of care outcomes; and (iii) the theoretical frameworks used to explain the nature of these relationships.

A research protocol detailing the review's search and data extraction strategy was prospectively registered and published on PROSPERO. Using PRISMA guidelines, seven databases were searched: Medline, HMC, CINAHL Plus, EBSCO, Science Direct, EMBASE, and Web of Science. The search strategy identified 3,680 articles. The applied inclusion criteria specified: (1) included articles had to examine the relationship between examined job demands and resources and a quality of care outcome (e.g., patient satisfaction, errors made), (2) that the research sample consist solely of doctors, (3) and be published in English. The data extraction and synthesis process was standardised by using a data extraction template.

In total, 16 relevant articles from five countries were included: the United States (n=6), Germany (n=5), Israel (n=2), the United Kingdom (n=2), and the Netherlands (n=1). Job demands was considered in 14 studies, including: perceived overload, patient demands, time

pressure, role and task conflict, physical load, and global job demands. In contrast, eight studies examined job resources, including: autonomy, control, social support and global job resources. The outcomes reviewed in the included studies were quality of care, errors made, patient satisfaction, and performance.

Global definitions of demands and resources demonstrated the anticipated relationship with all care outcomes. Similarly, high autonomy experienced by doctors was associated with fewer errors and better ratings of quality of care. The effect for remaining examined job demands (i.e., perceived workload, patient demands, time pressure) were mixed, while those relating to control and social support showed no relationship with most care outcomes. Most of the relationships involving patient satisfaction were observed to be non-significant. Only two studies utilised a theoretical framework: the effort-reward imbalance model and the person-environment fit.

While there is some evidence that the presence of demands and resources in doctors' work environment is related to care outcomes, this relationship is not as clear as some propose. The findings highlight the difficulty in measuring complex environments, and raise issues about possible mediators and measurement issues. There was a clear lack of theoretical grounding within the reviewed studies, with more work needed to examine potential mediators and moderators that can help understand the context of these relationships.

### **O135: A Flexible Workforce: Exploring the Case of Increased Flexibility in Working Conditions and what this means for Employees**

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Contemporary work conditions have changed dramatically in recent years. The economic downturn combined with advances in information and communication technologies (ICT) have created a situation of increased flexibility in work. Organisations have used flexibility as a strategy to decrease costs through downsizing and restructuring (Klaimo, 2003; Harrison, 1994). Moreover, advances in ICT has also facilitated the development of more flexible work conditions by enabling employees to complete work at any given time and in any location. This has resulted in work conditions that are not defined according to traditional rules of work. Emphasis is no longer placed on management structures and organisational rules and regulations to guide work. In contrast, with these new work conditions employees can work when, where and how they want. Employees are given greater autonomy as they become self-regulated and accountable for their actions (Allvin et al., 2011; Peters et al., 2014).

The potential benefits flexible working conditions can offer the organisation (eg. reduced costs) and employees (eg. autonomy) are well established. However, what is less documented are the risks associated with flexible working. Is there such a thing as too much autonomy? What are the consequences for employee health? Does increased flexibility influence organisational commitment? Answering such questions are essential given the increase of organisation in the UK introducing flexible work practices to their employees.

The purpose of this study was to explore the impact increased flexibility has on both employee wellbeing and on an employee's ability to effectively do his/her job. In particular, this study was interested in understanding what aspects of the psychosocial work environments can affect the flexible workforce.

In-depth, semi-structured interviews were conducted with employees working for a local authority in the UK. Twenty transcripts were obtained from discussions with employees

working across 5 departments in the local authority. All interviews were conducted face-to-face and ranged, on average, from 30-90 minutes. Preliminary analysis has identified themes relating to the type of work, social relations, work-life boundaries, professional isolation, health and wellbeing outcomes, coping strategies, and team versus organisational identity.

Initial results from this study suggest that consequences for the individual, team and organisation need to be considered before introducing flexible work practices. However, the evidence also suggests that the extent to which flexible work conditions impact employees is highly dependent on the type of work the employee is involved in. Finally, future research needs to consider a larger sample size for a more representative perspective on new working conditions. Longitudinal data collected pre, during and post changes made in work conditions is also needed to gain a better understanding of how adaptation unfolds for employees and how consequences may vary.

### **O136: Patient Safety and Occupational Health in Bosnia and Herzegovina Hospitals: First Insights and Opportunities for Improvement**

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Background: Patient Safety is the foundation of good patient care. Safety is a value which, ideally, everyone would agree upon. Adverse events in hospitals are a serious problem, annually killing more people than breast cancer or AIDS. Studies in different countries have shown that 2.9 % to 16.6 % of patients in acute hospitals have suffered one or more adverse events and that approximately half of them could have been prevented. Patient safety in health care received increased attention from the mid-nineties as a Public and Occupational Health challenge. Nonetheless it still has a fundamental role in the international health care and quality improvement debate. Therefore, our contribution represents a pilot project and it belongs to the subject of patient safety in Bosnia and Herzegovina by measuring the grade of patient safety in three hospitals in the district of Una-Sana Canton. It is the first study performed in this country and provides primary and exclusive insights to this important field for patients, health professionals and hospital leadership.

Methods: The research is based on data, which was first collected in an explorative and descriptive study. The latter was found to be more appropriate because of the transferability of results for other hospitals in this area. Individual qualitative narrative interviews were conducted with leading health professionals of the hospitals. The interviews were analyzed by qualitative content analysis. Further, a descriptive study with a selected questionnaire developed by the Agency for Healthcare Research and Quality (AHRQ) was used as basis for further research. The questionnaire was distributed to all hospital staff with a response rate of 33%, so 100 questionnaires could be analyzed. The limitations of the study will be described in the presentation.

Results: The confirmatory factor analysis showed good fit for the model and the questionnaire reliability was also adequate. The outcome dimensions "overall perceptions of safety" and "frequency of event reporting" both gave significant insights into patient safety in hospitals in Bosnia and Herzegovina. The latter showed, that 32.3% did not report any events. In this respect, hospital management support for patient safety was scored by 55%. However the overall perception of safety in hospitals was almost 50% positive and 30% negative. The lowest percentage of positive responses were on the composites of teamwork across hospital units, teamwork within units and staffing. The lowest positive score was on staffing. Although appropriate staffing is important for patient safety it is not the sole factor.

**Conclusions:** Our study showed overall low patient safety in three hospitals analyzed in the research project. However, it has provided the first insight into the grade of patient safety in hospitals in Bosnia and Herzegovina with various opportunities for improvement.

**Main messages:** The results of study support healthcare professionals to start a change process and establish appropriate strategies and instruments in order to improve patient safety and quality.

### **O137: Evaluating the Implementation and Outcomes of Interventions to Improve the Wellbeing of Healthcare Professionals: Findings and Implications of a Systematic Literature Review**

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**Background:** Much research has been published on the subject of improving the health and wellbeing of employees. Indeed, a large number of papers exist on this subject specifically within the healthcare sector.

**Aims:** We aimed to synthesise the extant research literature on interventions to improve the wellbeing of healthcare professionals. However, the main aim of this study was to highlight the importance of process and implementation evaluations in occupational health psychology research focusing on wellbeing interventions.

**Method:** Conventional systematic review. Our review focused on empirical studies published worldwide up to October 2015. Inclusion and exclusion criteria were applied to the search results, and papers were classified by two researchers as to whether they focused on evaluating intervention implementation or outcomes or both. We then extracted and synthesised data across the studies to learn the number of papers reporting implementation of interventions, how implementation evaluations are reported by researchers, and what outcomes were produced by the interventions.

**Results:** Published papers reporting occupational health interventions to improve the wellbeing of healthcare professionals do not usually evaluate implementation or process issues in a formal way. Moreover, the interventions are often not adequately described to be properly replicable and may not be conceived from a sound theoretical basis for bringing about behaviour change. The shortcomings of the research field may result from a prevailing focus on the evaluating intervention outcomes at the expense of evaluating intervention implementation. **Conclusions:** Wellbeing interventions should be grounded in behaviour change theory. Moreover, papers describing such interventions should customarily specify the active components of the intervention according to conventions established in related academic fields. Furthermore, researchers should formally evaluate the implementation of their interventions in addition to outcomes. In recent years, implementation evaluation has become a major consideration academic fields such as public health and health psychology. We argue that implementation evaluation should form a larger part of research in occupational health psychology moving forward.



### **O138: Emotional Intelligence, Self-Efficacy, and Creativity among Employees of Advertising Agencies**

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The present study attempted to investigate the relationship between emotional intelligence, self-efficacy, and creativity among employees of advertising agencies. It was also intended to explore the role of demographic variables including job designation and job experience in relation to variables of the study. The sample comprised of 205 employees of advertising agencies from Rawalpindi and Islamabad (Pakistan) including both men ( $n = 155$ ) and women ( $n = 50$ ) with ages ranging from 20-65 years. Self-report Measure of Emotional Intelligence (Khan, 2008), Generalized Self-efficacy Scale (Jerusalem and Schwarzer, 1995), and self-report Measure of Employee Creativity (Zhou and George, 2003) were used in the present study to measure emotional intelligence, self-efficacy, and employee creativity, respectively. The results showed that emotional intelligence, self-efficacy, and creativity were positively related with each other among employees of advertising agencies. Moreover, emotional intelligence and self-efficacy were found to be significant predictors of creativity. Mediation analysis showed a partial mediating role of self-efficacy in explaining the relationship between emotional intelligence and creativity. Significant group differences with respect to job designation and job experience were found in the present sample. Findings showed that creative directors and art directors showed significantly higher creativity than other job holders. Moreover, employees with extended job experience expressed greater emotional intelligence, higher self-efficacy, and elevated levels of creativity as compared to their counterparts.

### **O139: Macro Structures versus Micro Crafting: A Moderated Mediation Model to Predict Work Engagement and Creativity**

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In these times of pressuring global markets and turbulent change businesses are increasingly in need of engaged and creative employees. Organisation-level redesign to achieve this is costly, time-consuming and often fails to deliver the desired outcomes. In this light, a lot of research attention has recently been given to job crafting, which represents a micro-level design approach. Job crafting is, however, always performed in the context of structures determined at higher levels of the organisation. The interaction between these two levels of design and their effects on engagement and creativity has until now not received much attention in literature.

We aim to expand this literature by investigating the interaction between macro level business process design and micro level job crafting in predicting work engagement and creativity. Do employees use job crafting strategies to be more engaged and creative in the context of organisational processes of which the design is beyond their control? Following the Job Demands-Resources (JD-R) approach to job crafting, we focus on three job crafting strategies: (1) seeking resources, (2) seeking challenges and (3) reducing demands. Based on JD-R theory we propose a moderated mediation model in which we hypothesise that the structuring of business processes influences work engagement and creativity less when employees effectively use job crafting strategies (i.e. when they seek resources and challenges and do not reduce their demands).



Hypotheses were tested using a heterogeneous sample of 209 Dutch employee-supervisor dyads. Business process structuring, work engagement and job crafting were rated by the employee, employee-creativity was rated by the supervisor. Business process structuring was measured using a scale adapted from Binyamin & Carmeli (2010) consisting of the dimensions process planning, process clarity, process flexibility and managerial engagement. Data was analysed using the PROCESS macro (Hayes, 2013).

The moderated mediation hypotheses were confirmed for the job crafting strategies seeking resources and reducing demands as moderators, but not for seeking challenges. All interactions between the separate dimensions of business process structuring and seeking resources and reducing demands significantly predicted work engagement. Results show that business process structuring is positively associated with work engagement and creativity only when seeking resources is low. The pattern of interaction implies that seeking resources can fully buffer the effect of low process structuring on work engagement and creativity. Furthermore, business process structuring is positively associated with work engagement and creativity only if reducing demands is high. The effect of reducing demands becomes more detrimental for engagement and creativity as business process structuring decreases.

Our results show that employees' engagement and creativity are not affected by the structuring of business processes when employees use job crafting strategies to seek resources and refrain from reducing their demands, whereas employees who do not craft their jobs in such way may find their engagement and creativity negatively affected by business processes that low on structuring. From a practical point of view this implies that job crafting can be used to compensate for badly designed organizational processes.

#### **O140: Job Demands, Job Resources and Innovative Work Behavior: An EU Level Analysis**

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The current economic and social environment in the European Union, as a result of the economic crisis, has been destabilized. As a result, work practices changed in an attempt to survive on the market. The changes however did nothing more than further worsen the situation, with decreases in individual well-being and conversely job performance. Innovation has received increased support as a possible solution to this problem. This study aims to investigate the relationship between several job design variables and innovative work behavior (IWB). Set in the framework of the Job Demands Resources model, our proposed model looks at how demands (in terms of time constraints) and resources (autonomy and social support) impact IWB.

A secondary analysis was performed on data from the 5th European Working Conditions Survey (EWCS) from 2010. The focus for the current paper was on the 27 EU member states at the time of the data collection. After stepwise removal of incomplete cases or samples that did not meet our selection criteria (individuals working in companies with over 10 employees, and with a higher education) the final sample consisted of 12058 participants from the 27 EU member states. The independent variables (demands, autonomy and social support) were measured with items from the EWCS which were adapted from validated psychometric tools (such as the Job Content Questionnaire developed by Karasek et al., 1998), or, in the case of autonomy where items were selected by the researcher, a Cronbach's alpha test (0.64) as well as a Principal Component Analysis (KMO = .76,  $p < 0.001$ ) were conducted to make sure the items chosen were all measuring the same proposed factor.

A hierarchical linear regression was conducted in order to test the proposed model. In the first step age and gender were controlled for, and in the second step the independent variables were added. Overall, the model managed to predict 36.4% of variance in IWB after controlling for age and gender ( $R^2_{\text{change}} = 0.35$ ,  $p < 0.001$ ).

Autonomy and social support both significantly and positively predicted IWB. Job demands in terms of working at high speed and working long hours negatively predicted IWB. Interestingly, working under tight deadlines positively predicted IWB. This study adds to the existing knowledge base in the IWB area, as well as shedding some light on the demands - IWB relationship, which has historically been ambiguous. Some practical implications from this study are that future interventions should try and increase specific resources (autonomy, social support), as well as decreasing demands (in terms of working long hours and under high speed).

#### **O141: Impacts of Poor Economic Conditions in Working Environment on Mental Health and Workability**

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With the economic crisis working conditions have changed from working environments with high level of social security and support to competitive working environments with low level of employment stability.

The first victims of this new situation were workers with poor health. Due to their health condition they have not been able to adapt to the new work place demands: work intensity, time pressure, flexible working arrangements, flexible new complex demands and changed working procedures.

Poor physical health is often combined with poor mental health. Workers are often not able to maintain their workability on the level as workplaces demand.

To identify the main characteristic of workers with decrease of workability. Psychological evaluation of workers with malfunctions in adaptation to workplace demands was performed. For each particular worker workability estimation was performed with the most tailored suggestion for him/her according to possibility to adapt to the working environment.

From 2008 to 2015, 758 workers were included in the process of complete psychological evaluation. The psychological evaluation was composed from the following implemented psycho diagnostic techniques:

- general adaptation tests
- particular ability test
- personality questionnaire
- subjective evaluation of well being
- psychological interview and evaluation

The results of the study found 157 evaluated workers (20,0 %) have symptoms of mixed anxiety and depressive disorder (F 41,2), and 63 evaluated workers (8 %) have symptoms adjustment disorders (F 43,2). Workers with symptoms from F00 - F09 (organic, including symptomatic disorders and mental disorders) were rare. Other workers (2 out of 3 participating workers) had combination of poor physical, and as consequence poor mental health, without treatment.

Workers with intensive symptoms of depression, anxiety and several psychosomatic complaints were more often estimated as not able to perform any task. Those workers had also limited adaptation abilities. Workers with modest symptoms of depression and some particular psychosomatic symptoms had much better adaptation abilities they were more flexible and their workability was remaining.

Symptoms of adjustment disorders were temporary. Majority of workers with serious symptoms of anxiety, depression and with a lot of psychosomatic symptoms were not competitive at the labour market. All of them had problems with employment. They were unemployed or they performed unskilled routine tasks.

Workers with adaptation problems and those with symptoms of depression, anxiety or adjustment disorders were those who were less competitive at the labour market. They lost their employment and they were not able to get a new one. Economic crisis affected less stable personalities with poor mental health even more than other workers. As the consequence, those workers lost jobs and their health condition has gotten worse and worse. They were disappointed and they were less able to adapt to the new circumstances on the labour market - the consequence was depressed mood. Economic crisis affected working environment and the first victims were workers with poor mental health.

#### **O142: Managerial Quality and Employees' Mental Health. Results from a Multi-level Study**

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Research on the possible contribution of the psychosocial work environment to employees' mental health has important methodological challenges. One challenge is reporting bias that may occur when using individual-level self-reported data for assessing both work environment and mental health. In this study, we address this challenge by conducting multi-level analyses on the association of managerial quality, measured at the work-unit level, with employees' depressive symptoms, measured at the individual level, in both a cross-sectional and a longitudinal sample.

From December 2004 until June 2005, 12,744 employees in Danish eldercare received a questionnaire of working conditions and health and 9,949 (78%) responded. Of those, 6,304 responded to a follow-up questionnaire sent out two years later. After accounting for missing values and units with only one responding participant, the baseline sample consisted of 9,067 employees from 280 work units and the follow-up sample consisted of 5,474 participants from 278 units. Managerial quality was measured with the four item scale of the Copenhagen Psychosocial Questionnaire and was averaged at the work-unit level, i.e. all members of the work-unit were assigned the mean managerial quality score of the unit. Depressive symptoms were measured with the Major Depression Inventory with a cut-off point of  $\geq 20$  for indicating presence of substantial depressive symptoms. Using multi-level analyses, we estimated the association of work-unit level managerial quality with individual-level depressive symptoms both cross-sectionally and prospectively while adjusting for potential confounders.

There were 495 employees (5.5%) with depressive symptoms at baseline. Low managerial quality at the work-unit level was associated with individual-level depressive symptoms with an odds ratio of 1.40 ( $p=0.02$ ) in a preliminary cross-sectional analysis. The odds ratio was similar in a preliminary prospective analysis, albeit less precisely estimated.

The preliminary analyses indicate that poor managerial quality, assessed at the work-unit level, is associated with an increased likelihood of depressive symptoms among employees. Improving managerial quality may contribute to better mental health of employees.

### **O143: The Impact of Intimate Partner Violence (IPV) on Employee Mental Health and Work Outcomes**

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**Background:** Intimate Partner Violence (IPV) is a major public health concern in Australia. Rates of IPV are difficult to establish and there is reason to believe that IPV is under-reported. Recent statistics in Australia indicate that 17% of women and 5.3% of men aged 18 and over have been physically abused by an intimate partner, and 25% of women and 15% of men have been emotionally abused in this context. The consequences of IPV include significant physical, mental, social, and economic costs, not only for affected individuals but for families, the wider community, and society as a whole. The impact of IPV on the workplace is less well understood. However, given the known impact on mental health, it is likely that IPV will have significant implications for employees and employers.

**Aims:** The present study examined the nature and the unique impact of IPV on employee mental health and on work outcomes such as absenteeism and performance. Help seeking behaviour in the workplace was also investigated.

**Method:** The present study was part of a larger national study investigating violence, alcohol and drug use. Participants were recruited via an online social research 'survey panel' company. A total of 5118 Australian residents (males = 47.9%, females = 51.8%) aged 18 to 89 voluntarily completed the online Personal Safety Survey. Of the 2278 individuals who reported experiencing violence during their lifetime, 952 (41.8%) reported IPV as their most recent experience of violence (within the previous 12 months) and 1326 (58.20%) reported experiencing other types of violence within the previous 12 months.

**Results:** Employees who reported experiencing IPV in the previous 12 months also reported higher levels of depression, anxiety and stress, compared with employees who had never experienced violence and employees who had experienced other forms of violence in the previous 12 months. One way ANOVA found that employees who were victims of IPV reported a significantly greater impact on their work performance compared with employees who were victims of other types of violence. An independent samples t-test found that employees who reported physical IPV also reported a significantly greater effect on their work performance compared with employees reporting psychological IPV. Chi-square analysis found that employees reporting psychological forms of IPV took significantly more time off work compared with employees who reported physical forms of IPV. Help seeking behaviour in the workplace was found to be negligible with employees reporting they rarely sought assistance from managers or other colleagues at work.

**Conclusions:** Findings are discussed in relation to implications for employees and employers. Recommendations are made for future research to assist in developing policies, procedures, and practices to ultimately reduce the detrimental impact of IPV on workplace outcomes.

#### **O144: Correlation of Roles and Mental Health Functioning of Adult Children of Alcoholic Fathers in Pakistan**

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It has been amply demonstrated in clinical practice and through research that alcoholism is a disease that effects individual as much as the family. The effects are numerous ranging from non clinical to clinical problems. Moreover, the family members of the alcoholics especially the children regardless of the age develop certain roles in order to deal with the chaos in the family. The present study aims to study the mental health functioning, the roles assumed by the adult children of alcoholics and also the relationship between mental health and those roles. In order to achieve this aim the data was collected from private rehabilitation centers where the fathers were admitted for treatment of alcoholism and the family were counseled on an outdoor basis. To determine the mental health functioning the GHQ was used and for the roles RIS was administered on N=400 with 50% Male and 50% Female and the age range between 18-25 (M 21.45, SD 2.37). The results indicated a significant relationship between the two variables under study. The results are discussed in terms of the relationship and implications of the study.

#### **O145: Moderating Role of Organizational Culture in Relationship of Personality Traits and Positive Mental Health: An Empirical Study of Professionals Working in Pakistan**

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The present study aimed to investigate the moderating effect of organizational culture on the relationship between personality traits and mental well being i.e. positive mental health of the employees. Mental well being of the diverse workforce is a neglected area of investigation in Pakistan specifically in line with the changes in latest research trend in the west emphasizing more on the exploration of positive aspects of individual's functioning rather than disordered and dysfunctional aspects. The present article purports to study mental well being of the employees from positive psychology perspective thereby focusing on measuring positive mental health (complete mental health) of the employees based on the theoretical Dual Continuum Model of Positive Mental Health (Keyes, 2005). Moreover, moderating impact of the organizational culture on the relationship between the individual personal dispositions i.e. personality traits and positive mental well being were analyzed. Survey questionnaire booklets were distributed to 622 professionals belonging to health care sector, telecommunication sector, consultancy companies, banking sector, and educational institutions located at Rawalpindi, Islamabad, Lahore and Karachi. Self reported measures of personality traits (NEO-FFI), organizational culture (Denison Organization Culture Survey Questionnaire), DOCS, and positive mental health (Mental Health Continuum Short Form, MHC-SF) along with Brief Symptom Inventory (BSI) were administered for measuring complete mental health. Confirmatory factor analysis of the measures used in the present study was done and moderation analyses were computed for data analysis. Results findings indicated that all the measures were reliable and ample evidence for construct validity of the respective measures of the study were reported. Findings of moderation analysis revealed significant effects of the organizational culture traits based on the Denison Organizational Culture Survey model i.e. involvement, consistency and adaptability on the relationship between positive mental health i.e. emotional, psychological and emotional well being of the employees and personality traits. For the present article, theoretical backdrop of the Personality traits was based on the Five Factor model of Personality that comprised of five traits i.e., neuroticism, extraversion, openness to experience, agreeableness and conscientiousness. Moreover results of the moderation analysis have shown that involvement trait significantly moderated relationship

between agreeableness and positive mental health. However, Consistency, adaptability, and mission traits significantly predicted relationship between Extraversion and positive mental health. Findings of the present study have practical implications for the organizations to consider interactive effects of both individual personal dispositions and organizational factor while addressing employee well being and bringing positive organizational outcomes rather than dealing with them separately.

#### **O146: Impacts of Work-Related Stress on Productivity: Effective Management Techniques**

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Stress has become a major problem of everyday life and it tends to threaten the individual, family, organization and the society as a whole. Most often, workplace productivity is associated to the performance of "man and machine" and to some extent to safety parameters. However, it is slowly becoming evident that increase or decrease in productivity can also be related to the psychological well-being at the workplace. Work-related stress added to the stress from home-front can have a toll on the physical and mental demands of the human body and mind. Work-related stress can be due to various reasons ranging from work-related rumination, positive and negative experiences, apprehension, aggression and revenge, workplace violence and sexual harassment to other forms of dysfunctional behavior. It has been established that work-related stress can cause behavioral, physiological and psychological problems. Such problems can in turn lead to a variety of productivity losses in terms of absenteeism, workplace accidents, costs of compensable disorders and lawsuits, health insurance costs and job dissatisfaction leading to poorer performance. Hence, it is of prime importance for organizations to tackle work-related stress at an early stage through transformational leadership. Conflict resolution trainings, enhanced primary care, self-awareness counselling, stress reduction and wellness programs and a wide range of psychological interventions have proved to be effective in managing work-related stress and thereby increasing the productivity of the workplace.

#### **O147: Leading Ethical Matters to Followers: The Relationship between Ethical Leadership and Followers' Wellbeing Moderated by Autonomy at Work and General Self-efficacy**

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In recent years, increased attention has been drawn to the role leader's play in influencing followers' wellbeing (Nielsen et al., 2014). Research is starting to show the importance of ethical leadership with regard to employees' wellbeing (Kalshoven & Boon, 2012). According to the Conservation of Resources Theory (Hobfoll, 1989) job resources enhance followers' wellbeing (Salanova, Agut, & Peiro, 2005). In this context, it is argued that ethical leaders provide job resources (e.g., power sharing and role clarification), and therefore ethical leadership relates positively to followers' wellbeing.

The aim of the present study is to investigate the relationship between ethical leadership, which is operationalised by the dimensions of fairness, role clarification, people orientation, power sharing, integrity, ethical guidance and concern for sustainability, and three contrary indicators of followers' wellbeing (role ambiguity at work, frustration with work and irritation). These indicators are chosen because of their early identification role of serious disease pattern (Müller et al., 2004; Buunk et al., 1998). It is hypothesised that ethical leadership and the three

contrary indicators of wellbeing will be negatively correlated. Furthermore, based on a literature review autonomy at work perceived by the follower is introduced as a situational moderator variable and follower's general self-efficacy is added as a personal moderator variable in this model. In both cases, positive moderation effects are hypothesised.

Testing the model assumptions, a cross-departmental, cross-sectional, interbranch and retrospective online survey, based on a sample of working people ( $n = 247$ ) in the German-speaking area, was conducted. To measure the constructs standardised scales were employed. With the use of moderated regression analysis, the central hypotheses will be examined.

Findings show that all seven dimensions of ethical leadership are linked to reduced frustration at work, role ambiguity at work, as well as irritation. Especially the dimensions of integrity and fairness correlate significantly with the three contrary indicators of followers' wellbeing. Moreover, the assumed positive moderation effects can be confirmed.

We would recommend future research to examine long-term effects. Furthermore, the study demonstrates that organisations should support ethical leadership and promote an ethical context, e. g. by introducing ethical mentors, to enhance followers' wellbeing. Furthermore, individuals are attracted to, and are selected into organisations on the basis of perceived person-organisational values "fit" (Schneider, 1987). This means that organisations need to send signals during selection procedures that there is a strong ethical culture and individuals who behave ethically in their personal and professional lives are welcomed.

This investigation contributes to the current leadership-focused literature by examining explicitly how autonomy at work perceived by the follower and followers' general self-efficacy influence the relationship between ethical leadership and followers' wellbeing.

#### **O148: Passive Leadership and Employee Job Satisfaction and Engagement: The Role of Basic Need Satisfaction**

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The aim of this presentation is to explore the link between passive forms of leadership and job satisfaction and work engagement respectively, using two studies. Study 1 used cross-sectional data from 661 employees working in various occupations in Norway. Study 2 was a diary study in which 65 Norwegian employees completed a daily questionnaire on five consecutive working days, yielding 325 measurement points in total.

In study 1, we address the link between passive avoidant leadership (composed by laissez faire and management by exception passive leadership) and job satisfaction on a general level, while we in study 2 address the relationship between daily laissez faire leadership and work engagement on a daily basis. Moreover, we investigate the possible mediating role of frustration of general and daily basic psychological need fulfilment of autonomy, competence and relatedness in these structural relationships.

Study 1 revealed a significant negative link between passive avoidant leadership and job satisfaction, and further that lack of basic need fulfilment is an explanatory mechanism in this relationship. In study 2 we found support for a small, but significant, negative main effect of daily laissez faire leadership on daily engagement, which was mediated through posing a daily



threat to followers' basic psychological need fulfilment. In conclusion, our findings support the notion that passive forms of leadership can threaten basic psychological need fulfilment on a general and daily basis. However, it is warranted that further investigations address the topics on a daily basis, as our findings concerning daily relationships were not substantial.

### **O149: Leader-Member Exchange and Differentiation: Stress Remedy for Customer-Instigated Aggression?**

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Extensive evidence demonstrates that customer-instigated aggression - defined as occurring when an individual intentionally engages in negative verbal and/or physical actions and harms – psychologically, physically, or both – the organizational representative providing service to the instigator (LeBlanc & Barling, 2004) - leads to stressful outcomes. Yet, the relationship between customer instigated aggression and stress require further clarification. We argue that employees may have differential stress experiences following customer-instigated aggression depending on the level of resources they have at their disposition to manage stress. Following Hobfoll's (1989) Conservation of Resources (COR) theory, individuals experience stress after encountering negative events when they lack adequate resources to manage negative events. In this paper we argue that certain leadership contexts may protect and develop resources while others may jeopardize them and make them vulnerable. We conceptualise the leadership context in terms of the leader-member exchange (LMX) and the degree to which leaders differentiate their LMX relationships within work groups (LMX differentiation).

By merging the LMX, stress, and workplace aggression literatures – an understudied amalgamation – we develop a model of how leadership contexts influence COR's "resource assessment" mediation hypothesis and ultimate stress experiences that result from employees' exposures to customer-instigated aggression. Through this model we hypothesise that customer-instigated aggression will have a negative relationship with resource assessment when there is Low LMX and Low LMX differentiation and when there is high LMX and high LMX differentiation. Conversely, we hypothesise that the relationship will be positive when there is high LMX and low LMX differentiation. Finally we hypothesise that the indirect relationship between customer aggression and stress through resource assessment is positive when LMX and LMX differentiation are either both low or both high. We evaluated our hypotheses as a multilevel three-way moderated-mediation model which we test using Bayesian analysis with a sample of 492 direct care nursing staff in 95 workgroups.

The paper makes four key contributions. First, we integrate the COR and workplace customer-instigated aggression literatures to refine our understanding of the resource assessment mechanism that determines whether employees experience stress in the aftermath of customer-instigated aggression. Second, by merging the stress and LMX literatures, we join the handful of studies that investigate the overall effect of LMX on employees' stress level. Third, we argue that LMX might not be enough to assuage negative outcomes that result from aggressive customer interactions and explore the combined effect of LMX and the LMX differentiation. Finally, we make a methodological contribution. This study is, to our knowledge, the first to use a Bayesian 3-way multilevel moderated mediation model with a group level moderator and, therefore, its application is a contribution in itself.



### **O150: Personality and Work Stress: The Role of Five-Factor Model Traits and Cynicism in Perceptions of Work Characteristics**

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The role of individual differences in perceptions of stress has long been recognized. Despite this, the models that are used to measure stress at the workplace—the job strain model and the effort-reward imbalance model—were developed to assess strenuous work characteristics and their health effects, regardless of the individual. Because work characteristics are usually measured using self-reports the measures cannot be completely objective. The present study examined the susceptibility of the job strain model and the effort-reward imbalance model to Five-Factor personality traits and cynicism. In addition, this study tested the longitudinal measurement invariance of the effort-reward imbalance scales. This study was part of the ongoing prospective, population-based Young Finns study. The measurements for the present study were carried out in 2001, 2007, and 2012. Five-Factor personality traits were assessed with a questionnaire on the Five-Factor model, and cynicism was assessed with a scale derived from the Minnesota Multiphasic Personality Inventory. Work characteristics were measured with questionnaires on the job strain model and the effort-reward imbalance model. The results showed that high neuroticism was associated with higher job strain and higher effort-reward imbalance and that high agreeableness was associated with lower job strain and lower effort-reward imbalance. High extraversion, high openness, and high conscientiousness were associated with lower job strain. Furthermore, high conscientiousness was related to lower effort-reward imbalance only in men. High job strain prospectively predicted higher cynicism six years later. The effort-reward imbalance scales achieved strict longitudinal measurement invariance and showed adequate criterion validity.

Although developed to measure the structural work environment, the job strain model and the effort-reward imbalance model seem to be susceptible to Five-Factor personality traits—especially to neuroticism and agreeableness. In addition, high job strain seems to have far reaching consequences on cynical attitudes. Furthermore, the results show that scores on effort-reward imbalance from different time points can reliably be compared with each other. This study shows that organizations and occupational health services should apply a more person-oriented approach to increasing wellbeing at work.

### **O151: Individual Differences in Affect Regulation Make the Difference: Action-State Orientation as a Moderator of the Relationship between Situational Constraints and Perceived Competence at Work**

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Employees are frequently faced with situational constraints at work (e.g. interruptions by others, conflicting demands, lack of information). Recent research has differentiated between two inter-related but different types of constraints: interpersonal and job context constraints (e.g. Liu et al., 2010). Whereas interpersonal constraints refer to obstacles initiated by other people, job context constraints are related to obstacles in one's work environment. So far, situational constraints have widely been conceptualized as hindrance stressors (Podsakoff et al., 2007) that may impede well-being and work performance (Gilboa et al., 2008; Spector & Jex, 1998).

In this study, we investigate the relationship between situational constraints and employees' perceived competence at work. Competence refers to the belief in one's capability to perform work tasks effectively. We argue that situational constraints might not have detrimental effects on perceived competence for everybody to the same extent and might sometimes also increase individuals' perceived competence.

Based on the theory of self-regulation by Kuhl (2000), we argue that inter-individual differences in the regulation of affect under stress in terms of the disposition toward action-state orientation moderate the relationship between constraints and perceived competence.

Individuals high in action orientation are characterized by two main abilities. First, they are able to relax and stop ruminations in the face of hindrances and difficulties. Second, they are able to implicitly and autonomously self-generate positive affect and motivate themselves (Koole & Jostmann, 2004). In contrast, state-oriented individuals face difficulties in the control of intrusive cognitions, and are unable to control negative and self-generate positive affect when faced with stressful experiences. We hypothesize that action-oriented individuals who can quickly down-regulate negative affect (self-relax) and up-regulate positive affect (self-motivate), perceive an increase in competence, whereas state-oriented individuals experience a decrease in competence when being confronted with both interpersonal and job context constraints.

To test our hypotheses, we conducted a weekly diary study for 14 weeks with 83 employees. Participants first completed a single questionnaire on their action-state orientation. Each Friday, they completed measures on situational constraints and perceived competence as referred to the previous workdays. We controlled for perceived competence as assessed in the previous week.

Results from multilevel modelling provide evidence for action-orientation as a cross-level moderator of intra-individual links between situational constraints and competence on the week-level. Whereas interpersonal constraints are related to an increase in competence for individuals high in self-motivation, low levels of self-motivation yield decreases in competence. We find a similar pattern for self-relaxation. Job context constraints are associated with gains (losses) in competence under high (low) levels of self-relaxation.

We discuss some practical implications for selection and training of employees and the theoretical implications of our results.

In conclusion, whether constraints are opportunities for mastery (vs. failure) depends on the interplay of the type of constraints and the aspect of action-state orientation under study. Our study contributes to occupational health psychology by linking the literature on job constraints and stress to theory and research on self-regulation and functional affective-cognitive aspects of personality.

## **O152: Any Regrets? Occupational Regrets and Well-Being in a Four-Year Follow-Up Study**

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Background: The impact of occupational regrets on employees' occupational well-being (burnout and work engagement) was investigated in a four-year follow-up study (2008-2012). Profiles of occupational regrets were formed on the basis of appraisals of regrets (i.e., negative affect related to regret, its effect on life, and how different life would be without the regret) in 2008.

**Methods:** The study was conducted among 271 Finnish professionals who had responded to a questionnaire survey in 2008 and 2012. In 2008, the participants were on average 33 years old (age range 26 - 38 years) and 83 % of them were men. Of the study participants, 138 participants reported having no occupational regrets. In turn, 133 participants named regrets and the profiles of their regret appraisals were examined using latent profile analysis (LPA). After deciding the best LPA solution of regret appraisals, Analyses of Covariance (ANCOVA) were calculated to investigate differences between the profiles and participants with no regrets in burnout and work engagement measured in 2008 and 2012. In the ANCOVA analyses, age, gender and educational level were controlled for.

**Findings:** In addition to those participants who had No regrets (n = 138), two occupational regret profiles were identified: Low negative impact (Profile 1; n = 102) and High negative impact (Profile 2; n = 29) of regrets. Participants who had No regrets reported significantly lower burnout in 2008 than participants with regrets (Profiles 1 and 2). Furthermore, four years later in 2012, the participants in the profile of High negative impact of regrets reported higher burnout than participants with No regrets, as well as lower work engagement than all the other participants (i.e., participants with No regrets and participants in Profile 1).

**Conclusions:** The study highlights the occupational well-being outcomes of education and career choices which are appraised as impacting affect and life adversely even years after the choices were made. This knowledge can be particularly applicable in mentoring and supervision settings where employees are reviewing their past decisions and refocusing for the future.

### **O153: The Association between Workplace Bullying and Depressive Symptoms: The Role of the Perpetrator**

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**Objectives:** The aim of the present study was to investigate whether depressive symptoms of the bullied targets differ according to who the bullying perpetrator was.

**Methods:** We used cross-sectional questionnaire data from the Danish Working Environment Cohort Study (DWECS 2010) and the Work and Health Study (WH 2012). A total of 14,453 respondents (47% men and 53% women) participated in DWECS 2010, and a total of 16,412 respondents (46% men and 54% women) participated in WH 2012. After excluding respondents who did not label themselves as being bullied, the statistical analysis included 2,478 bullied individuals. We compared respondents who reported being bullied by their (1) leader, (2) subordinates, (3) clients, or (4) colleagues, respectively. The occurrence of depressive symptoms was measured by the Major Depression Inventory (MDI).

**Results:** Workplace bullying was experienced by 10.2% in DWECS 2010 and 11.9% in WH 2012. The most frequent perpetrator of bullying was clients (41.5%) in DWECS 2010 and colleagues (60.3%) in WH 2012. In DWECS 2010, the MDI scores of those who were bullied by clients were significantly lower than the MDI scores of the other three groups. In WH 2012, respondents who reported bullying from leaders had a significantly higher mean MDI score than participants being bullied by colleagues. Also in WH 2012, our results indicated that those who are bullied by a leader have a higher MDI score than those bullied by clients, although this difference was statistically insignificant at conventional levels.

Conclusion: We did not find exactly the same results in the two surveys, yet our findings indicate a similar pattern, with a tendency of more severe depressive symptoms among employees who are exposed to bullying by their leaders, and the least severe symptoms among those who reported bullying from clients.

#### **O154: Trends and Obstacles to Employment of Persons from Vulnerable Groups in the Netherlands**

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Introduction: There have been numerous efforts by the governments to stimulate development of inclusive organisations, that is, organisations that have a substantial number of employees originating from the vulnerable groups (long-term unemployed, persons with physical or mental difficulties). Previous research indicates that it is still unknown what is the best way to stimulate employment of vulnerable groups within organisations (Kluve, 2010). In this study, we wish to explore the trends of employment of vulnerable groups in Netherlands, examine regional differences and explore reasons given by organisations as major obstacles to employment of persons from vulnerable groups.

Method: The study is based on Netherlands Employers Work Survey (NEWS), a large dataset that collects data on work and employment in organisations in the Netherlands. It is a cross sectional, multiwave study. For the current analysis we used 2010, 2012 and 2014 waves, where in total 13,793 organisations participated. The analyses are based on descriptive analyses (means, percentages) and t-tests.

Results: Over the past few years on average 4.6% of employees in organisations were originating from the vulnerable groups, and numbers have been decreasing since 2010 (when it was 5.5%). The results show also great regional differences. The organisations in the province of Groningen (2.6%), Utrecht (2.7%) and North-Holland (2.9%) score significantly worse concerning percentage of employees from vulnerable groups than organization in Flevoland (8.0%), Overijssel (7.3%) and Limburg (6.4%). The most common obstacles for employment of persons from vulnerable groups was that the work does not allow itself for it (named by 49% of organisations in 2014 compared to 56% in 2010), followed by the expected costs of the coaching (10.5% in 2014 and 2010) and expected organisational hassles it would generate (10.2% in 2014 vs 13.4% in 2010).

Conclusion: Organisations in the Netherlands have a long way to go in order to become inclusive organisations, as percentages of employees originating from vulnerable groups are low and have not been increasing over the years. Results show that a uniform approach to tackling this problem will not work, as there are large regional differences and also differences in perceptions of obstacles. We recommend that future research pays more attention to reasons for the regional differences and explores in more depth the obstacles to employment of people from vulnerable groups. We also recommend that more time and energy is invested in awareness raising among organisations concerning possible adaptations of work for vulnerable groups among employers and use of governmental policies that financially stimulate employment of persons from vulnerable groups.

## **O155: Examining Urban, Rural, and Remote Northeastern Ontario Registered Nurses QOWL Factors and Stress**

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**Objective:** It has been well established that Canadians living in rural or remote locations are known to have poorer health status than those living in urban settings. Nursing practice in rural, and remote areas has unique characteristics and challenges that affect nurses' quality of work life (QOWL) and stress. The aim of this study was to examine similarities and differences of northeastern Ontario Registered Nurses' (RNs) evaluation of the QOWL in urban, rural, and remote hospitals in northeastern Ontario, and QOWL factors associated with nurse's stress.

**Methods:** A mixed methods sequential explanatory design was used to explore the QOWL and stress of RNs (n=173) working in one large and one small urban, one rural, and one remote hospital location across northeastern Ontario, Canada. Quantitative data were collected with a self-administrated questionnaire that combined demographic questions and three scales: the Brooks' Quality of Nursing Work life (BQNWL), the Practice Environment Scale of the Revised Nursing Work Index (PES-NWI-R), and the Nursing Stress Scale (NSS). Multiple and logistic regression models were calculated to determine if nurses QOWL and NSS scores were associated with age, age >34, nursing experience >5 years, geographic location, full time employment status, income > 60 K, ability to take breaks, marital status, general health rating, exhaustion in the past year, physical and psychological violence in the workplace, and the PES individual components, total and subscale scores. Qualitative data were collected through face-to-face semi-structured interviews with RNs and nurse leaders (N=17) following quantitative data analysis. Qualitative interviews were transcribed and repeatedly reviewed to facilitate sorting and coding of data to identify common patterns and themes.

**Results:** Three key factors were found to be associated in both the QOWL and NSS regression models that included: adequate support services that allow nurses to spend time with patients, in the PES staffing subscale, enough staff to get the work done, in the PES staffing subscale, and supervisory staff that is supportive of the nurses, in the PES nurse manager ability leadership and supportive nurses subscale. Mixing of the quantitative and qualitative results revealed that increased workload and staffing issues were key themes reported by the majority of nurses across all geographic locations. Differences were noted between nurses working in urban, and rural and remote locations. Nurses in rural and remote settings described situations of unequal access to healthcare system supports, resources, services, and funds needed for patient care and professional practice.

**Conclusion:** Findings from this study suggest healthcare system wide inequalities related to access to supports, resources, and services are factors that have a negative impact on rural and remote nurses QOWL and stress. Decision and policy makers may need to consider the unique context of rural and remote hospitals which includes the health of the rural population, issues related to the emergency transportation of patients, recruitment and retention factors of all health care professionals, and the role of nurses when creating policies and funding models.

### **O156: Under-Rewarded Boss: Gender, Workplace Power, and the Distress of Perceived Pay Inequity**

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What happens when the boss feels under-rewarded? The relationship between perceived pay inequity and distress depends on a complex intersection of job authority and income-and differences between women and men further complicate the narrative. Using data from the 2005 Work, Stress, and Health study (N = 1,476), we observe that job authority, income, and gender interact to modify the distress of under-reward. We examine anger and anxious malaise as two forms of distress. Gender modifies the joint contingencies of job authority and income such that the positive association between perceived underpayment and both forms of distress are significantly stronger among higher-earning female managers. By contrast, higher earnings have a protective function among male managers. The difference between higher earning male and female managers is dramatic: Among managers who feel underpaid, women average about 3.5 days per week of anger compared to men's one day per week of anger. The patterns for anxious malaise are similar. Importantly, these differences hold net of adjustments for the gender composition of the occupation, the gender composition of the workplace role-set (e.g., superiors, subordinates, coworkers), and stress exposures (e.g., conflict at work, work-nonwork interference, time pressure). Among middle managers-that is, those with superiors-working under a female superior exacerbates that positive relationship between perceived underpayment and distress-and that effect is amplified the greater the percentage of female in the occupation. Collectively, our findings speak to diverse social-psychological theoretical traditions related to distributive justice, status structures, expectations, and legitimacy. Moreover, our efforts dovetail with (and informed by) recent interest in the sociology of mental health about the gendered implications of the status-power nexus and emotional well-being.

### **O157: Palatable Unjust Desserts: How Procedural Justice Weakens the Pain of Perceived Pay Inequity**

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Decades of equity and distributive justice research document that perceived pay inequity is associated with more distress. However, little population-based research has evaluated the situational factors that modify this association. Using nationally representative data from the 2002, 2006, 2010, and 2014 Quality of Work Life modules of the U.S General Social Survey, the present study elaborates on the classic focal association between perceived pay inequity and distress by illustrating the ways in which procedural justice in the workplace functions as a protective resource. Results indicate that compared to workers who perceive to be paid appropriately, workers who perceive underpayment are more dissatisfied with their jobs. The pattern resembles a gradient whereby experienced dissatisfaction increases with the severity of underpayment. However, contrary to theory that overpaid individuals should be more dissatisfied than those who perceive appropriate pay, results indicate no difference in job dissatisfaction between overpaid and appropriately paid workers. Indicators of procedural justice weaken the positive association between perceived underpayment and job dissatisfaction. For those who perceive high levels of promotion prospects, promotion fairness, and decision-making participation, the relationship between perceived underpayment and dissatisfaction is flat. I compare dissatisfaction as an outcome with subjective stress and mental health assessments. I situate these findings in a broader discussion on the emotional consequences of distributive injustice and the conditions that protect workers.



# **O158: Workers' Perceptions of Occupational Safety and Health services Availability and Quality: Considerable Variation by Demographic, Occupational and Companies Characteristics**

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**Background:** Easy to access occupational safety and health (OSH) services of good quality are important to secure workers' health. The first European survey on New and Emerging Risks (ESENER1) showed that an effective OSH management depends on the availability of expertise and competencies of OSH professionals. Recent studies have also suggested that there are several differences in how workers perceive the availability and efficacy of OSH services. Especially those with a low occupational position, workers in small companies and persons in precarious employment might be at risk for an inadequate protection. However, no comprehensive study on variance in OSH service availability and quality has been conducted so far including main demographic, occupational and companies characteristics which may account of such differences.

**Methods:** The large study's sample (8,000 participants; 46.2% women; mean age 43 years) is representative of the Italian workforce and comes from the 2014 survey on perceptions of health and activities related to the management of OSH (INSuLa) conducted by the Italian workers' compensation authority. The aim of the study is to investigate the employee's evaluation of availability and quality of different OSH services. Bi- and multivariate statistics were applied to study differences in OSH evaluation by several demographic, occupational and companies' characteristics. All measures were self-reported through a computer-assisted-telephone-interview (CATI).

**Results:** We found a considerable variance in all indicators of OSH service availability and quality when different subgroups were compared. Female workers, younger workers, persons with a lower occupational position and individuals in precarious employment reported more often that basic services like access to an occupational health physician service or to a health and safety manager were not available in their company. Subjective evaluation of the quality of OSH services (e.g. compliance of the employer with OSH rules, trust in OSH authorities) showed less variance, however, negative evaluations were more common in older workers, clerical workers and trainees, individuals in precarious employment and workers in the primary sector. In contrast to previous findings, no clear pattern for education was found. As expected, we observed that workers in small companies were less satisfied with OSH services as compared to medium/large scale employers. Regarding to economic sector we observed significantly less access to services and a more negative evaluation of quality in the primary sector and in the public sector (in particular in the public administration and the health care sector).

**Discussion:** This study provides useful information to investigate the impact of the Italian OSH legislative framework (D.Lgs. 81/08) throughout the Italian companies and workers by considering the variance in the availability and effectiveness of OSH services due to workers' demographic, occupational and companies' characteristics. Findings provide a monitoring of the barriers and needs related to the management of health and Safety at work in order to improve the OSH policies at national as well as European level.

### **O159: Drivers of Change in Introducing Occupational Health Management**

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Occupational health management covers the areas of occupational health and safety, health promotion at the workplace as well as its management and organisation. The question of how to develop these three areas together is often a particular challenge for organisations. This is because these areas touch in different ways the cultures and (power) structures of such organisations. In our paper we want to examine the role of 'drivers of change' as a connecting element between the three areas of occupational health and safety, health promotion at the workplace, and their management and organisation. 'Drivers of change' are people who can contribute as a function of their position and competencies to the successful implementation of occupational health management structures.

In a systematic review of the literature on predictors and moderators of OHS and WHP commissioned by the Federal Institute for Occupational Safety and Health (Bundesanstalt für Arbeitsschutz und Arbeitsmedizin - BAuA) 'drivers of change' are identified as factors in the context of culture and communication. This corroborates the idea that dealing with health in organisations is closely linked to their cultures. We understand the concept of organisational cultures as the shared meanings and symbols that provide people orientation in their everyday activities. 'Drivers of change' must have, in addition to their professional skills, competence in accessing and applying knowledge about these cultural practices.

According to actor-network theory, those organisational innovations that are useful in the (cultural) everyday activities of the people involved are most likely to be accepted and institutionalised. This means in turn that proposed standardised measures must be adapted to the respective cultural context. In this model, 'drivers of change' are part of practice groups with certain shared meanings and symbols by means of which structures and resources are negotiated.

With this in mind, we want to discuss, which promoting and inhibiting factors affect how 'drivers of change' can participate in practice groups. One focus is on the question of how success can be made possible in the context of specific hierarchies and structures. In other words: how can 'drivers of change' develop skills on the basis of which the contextual implementation of desired measures in occupational health and safety and occupational health promotion can be achieved?

### **O160: A Process Evaluation of the Implementation of the Danish National Return-to-Work Program**

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Objectives: In 2008 the Danish government launched an action plan to reduce sickness absence and improve labour market participation, encompassing 39 initiatives including the Danish return-to-work (RTW) program. This program was conducted in 21 Danish municipalities. The aim of this study was to evaluate the implementation of the program.



**Methods:** Inspired by the work by Saunders and colleagues we structured the process evaluation along six main topics: (i) reach and recruitment of target population; (ii) recruitment of RTW teams; (iii) fidelity, ie, the extent to which the implementation was consistent with the principles of the programs; (iv) dose-delivered, ie, the extent to which the RTW teams used the program tools, followed the procedures, and cooperated with beneficiaries and external stakeholders; (v) dose-received, ie, the extent to which beneficiaries were exposed to different parts of the program and how beneficiaries assessed the group courses offered by the RTW team members and (vi) contextual factors, ie, aspects that may have influenced the implementation. To assess these topics we formulated 29 implementation criteria and used qualitative and quantitative data from administrative records, interviews, field notes, and questionnaires.

**Results:** All 21 municipalities integrated the basic features of the RTW program into the existing framework of the sickness benefit management system to an acceptable degree, ie, establishment of RTW teams, participation of RTW team members in the training courses, and following the general procedures of the program. For most measures of fidelity, dose-delivered, and dose-received the level of implementation varied considerably between the municipalities. Fidelity scores measuring the quality of the interdisciplinary teamwork, mutual learning and continuous evaluation to achieve a more in-depth and more precise work ability showed large variations with five municipalities showing high, eight moderate, and eight low fidelity scores. Large differences were also found regarding dose-delivered, particularly in the quality of cooperation with beneficiaries, employers, and general practitioners. Only 50% of the first consultations with the RTW coordinator were conducted in time. Among participants who were employed when their sickness absence period started, only 9% had at least one meeting with their workplace.

**Conclusion:** It was feasible to implement the basic elements of the RTW program in all municipalities. However, level of implementation varied substantially between the municipalities which might partly be due to the complexity of the intervention. Establishment of well-functioning interdisciplinary RTW teams might require more time and resources, while ensuring early assessment and more frequent cooperation with employers might need more general adjustments in the Danish sickness benefit system.

#### **O161: Return to Work among Employees Sick-Listed for Common Mental Disorders: Design of a Cluster Randomized Controlled Trial of an Intervention Conducted at the Occupational Health Service**

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**Background:** Common mental disorders (CMD:s) are the leading cause of sick-leave spells in Sweden, resulting in suffering for the individual and financial costs for the employer as well as for society at large. A small but growing number of studies suggest that interventions considering both individual and work-related factors are successful in facilitating return to work (RTW) among employees with mental ill-health. The occupational health service (OHS) has knowledge of the employee's work environment and can offer treatment facilitating the employee's RTW while taking into account both the individual and the work situation.

**Aims:** The study aim is twofold: first, an intervention that addresses both individual and workplace related aspects among employees sick-listed for work-related mental ill-health will be evaluated. The primary outcomes are return to work and cost effectiveness. Secondly, the OHS staff's adherence to the intended treatment and associations with the outcome of the intervention will be assessed.

**Methods/Design:** In this randomized controlled trial, fifteen case managers at the OHS have been randomized into either performing the intervention or into giving care as usual. The intervention involves both the employee and the employer, and comprises problem solving, stepwise activation, and regular follow-ups. Employees who are sick-listed for work-related mental ill-health are recruited consecutively by the OHS case managers. Outcomes will be assessed at baseline and at 6 and 12 months follow-up. A long-term follow-up at three years is also planned. The primary outcome is RTW during a one-year period after study inclusion and data will be obtained through The Swedish Social Insurance Agency (register-based data) as well as by monthly SMS messages from the employee. Secondary outcomes consist of self-reports concerning mental health, work ability, the psychosocial work environment, the participants' satisfaction with the intervention or treatment as usual and the OHS staff's adherence to the planned intervention. Finally, the intervention's cost effectiveness, compared to treatment as usual, from both the societal and employer perspective will be evaluated.

**Discussion:** Failing to consider the work environment for employees sick-listed due to work-related mental ill-health may lead to repeated and/or prolonged sick-leave spells. The current intervention considers both the individual and the working context. If the intervention proves successful, it may benefit the participants in terms of reduced sick-leave rates and improved quality of life. In addition, it may be of benefit as well as reduce costs from both a societal and employer perspective. As the intervention is planned to be implemented in the everyday work at the OHS, it may, in the long-run, also benefit other people on sick leave for work-related CMD:

## **O162: Psychosocial Work Environment in Ghana's Oil and Gas Industry: A Cause for Concern?**

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The distinction between the physical and psychosocial work environment is blurred and as such it can be difficult for it to be included appropriately in legislation and identified by Occupational Health and Safety (OHS) professionals. Research on the psychosocial work environment and occupational health psychology has largely been based on the influence of various aspects of the work organization and management on health, safety, and organizational outcomes. Psychosocial risks including bullying, harassment and violence are major challenges in OHS. Developing countries including Ghana have done very little in terms of OHS in general and psychosocial risks in particular owing to lack of resources, political-will and monitoring and enforcement of existing laws respectively (Kortum & Leka, 2014). This study adopted a qualitative approach using semi-structured interviews to investigate the nature of the psychosocial work environment in Ghana's oil and gas industry. Fifteen (15) employees participated in the study. Results indicate that employees report a very stressful psychosocial work environment. Implications of these findings for employee health and safety in the industry will be discussed. Benefits to organisations that adopt psychosocial risk management as a business best practice including an enhanced corporate image, reduced costs (absence, medical treatment, accidents, insurance premiums, liabilities), increased employee engagement and commitment, work effectiveness and efficiency and higher productivity will be highlighted.

### **O163: The Effect of Interpersonal Mistreatment at Work on Employee Health: A Three Wave Longitudinal Study**

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Being interpersonally mistreated in organisations is a relevant concern for researchers, managers and practitioners due to detrimental consequences for the target of mistreatment, for the people around the target and for the organisation itself. Moreover, the longitudinal approach on mistreatment at work is very limited, therefore the information on long term consequences is insufficient.

The present study aims to investigate the health impairment effect of mistreatment over time. We expect that mistreatment will have a positive relationship with physical and mental health complaints. We employed a 15-item measure of mistreatment, tapping into various forms of interpersonal mistreatment at work (e.g., ostracism, incivility). The hypotheses were tested using a three-wave panel design (3 months interval) on a sample consisting of 400 individuals. Structural equation modeling was used in order to test the cross-lagged relationships. The results partially supported the hypotheses. Mistreatment at T1 had a positive relation with mental health complaints at T2, but no significant relation was found between mistreatment at T1 and physical health complaints at T2. The same results were found between mistreatment at T2 and health complaints at T3, confirming the findings.

This study advances knowledge in the field of interpersonal mistreatment at work by showing its rather stable deleterious effects on health in time. Such a longitudinal approach draws attention on the fact that the experience of being mistreated at work, in various forms, is an experience that is not likely to be experienced at a single moment in time.

At least three limitations of the present study were identified. First limitation is represented by the use of self-report measures, that might lead to common method bias. Second, mistreatment is not normally distributed in the current sample. Third, unwanted sexual attention items from mistreatment scale had to be excluded during the analysis due to low variance in data. Taking into consideration the stability of mistreatment and physical health complaints over time, future studies could consider longer time intervals between the study waves.

### **O164: The Study of Workplace Incivility Based on Emotion: The Moderating Effects of Personality and Organizational Factors**

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Workplace incivility is widely found inside organizations, has harmful effects, and it's especially difficult to prevent and control because of its low intensity and the ambiguous intention of the perpetrators. In order to summarize existing research about workplace incivility, the author clarified the conceptual boundaries between incivility behaviors and other deviant behaviors in the workplace, investigated the development mode of workplace incivility, and introduced the emotional reaction model based on the cognitive appraisal theory of emotion and affect events theory. In order to improve the emotional reaction model put forward by Porath and Pearson (2012), the author assumed that: (1) the number of workplace incivilities suffered by victims will affect their subjective well-being and counterproductive work behavior, and emotional reactions such as anger, fear and sadness will mediate this relationship, (2) personality variables such as hostile attribution bias and trait anger will moderate the relationship between workplace incivility

and negative emotional reactions, and (3) organizational variables such as supervisor social support and workload will moderate the relationship between emotional reactions and the outcome variables.

The sample is consisted of enterprise staff in Wuhan City, China. A questionnaire was used for data collection, and analysis was conducted using SPSS17.0. The results show that: (1) The more workplace incivilities individuals experience, the lower the subjective well-being and the more CWB they will have. In addition, the more workplace incivilities individuals experience, the more negative emotional reactions (anger, fear and sadness) they will have. When individuals experience more negative emotions (including anger, fear and sadness) their subjective well-being level will be lower, and they will display more counterproductive work behaviors. Only anger was a mediator in the relationship between workplace and the outcome variables (including subjective well-being and counterproductive work behavior); (2) Hostile attribution bias is not a moderator in the relationship between workplace incivility and negative emotional reactions. Trait anger moderates the relationship between workplace incivility and an individual's anger; (3) Supervisor social support has a negative moderating effect in the relationship between anger and subjective well-being, and has a positive moderating effect in the relationship between an individual's anger, fear emotions and counterproductive work behavior. Workload has a negative moderating effect in the relationship between anger and counterproductive work behaviors.

Overall, the results roughly supported the hypothesis, showing that anger plays a dominant role in the long-term accumulation process of workplace incivility. The relationship between workplace incivility and counterproductive work behaviors has some complex mechanisms which are still unknown, and future studies are needed to further explore these interactions. In addition, future research should bring cognitive evaluation into this model of workplace incivility, as well as more personality and organizational factors, expand the study sample, and use other experimental methods and possibly a longitudinal design to determine the causal relationship among various factors.

### **O165: Political Skill as a Buffering Moderator of the Adverse Effects of Emotional Dissonance on Employees' Well-being**

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Foremost in services sector occupations employees are frequently required to engage in emotional labour, which involves the display of specific emotions to conform to organisational display rules and to achieve organizational objectives. Research has demonstrated that the experience of emotional dissonance between felt emotions and those required by the job role, predicts impairments in employees' well-being. In order to overcome emotional dissonance employees need to exert self-control. Thus, the limited strength model of self-control accounts for the adverse effects of emotional dissonance on well-being. It states that different acts of self-control draw on and deplete a common limited regulatory resource, which can cause impairments in well-being. Especially when limited regulatory resources are strongly depleted employees are more likely to display inappropriate emotions at the workplace. These reactions of emotional deviance have also been demonstrated to impair employees' well-being.

In order to prevent the negative effects of emotional labor, we examined political skill as a potential buffering moderator of the relationship between emotional dissonance and well-being. Political skill can be defined as the ability to effectively understand others at work, and to use such knowledge to influence others to act in ways that enhance one's personal and/or organizational objectives. Integrating research on emotional labor and political skill, we propose

that in contrast to individuals with low political skill, highly politically skilled individuals have access to a broader range of emotion regulation strategies. Consequently these individuals are less likely to display emotional deviance reactions in cases of high emotional dissonance and associated regulatory resource depletion. Thus, a broad access to emotional labor strategies helps politically skilled employees to reduce the adverse impact of emotional dissonance on well-being.

**Method:** Our study is based on self-reports of N = 250 employees working at a German energy supplier. As criterion variables we used the burnout dimension depersonalization and psychosomatic complaints.

**Results:** The results suggest that emotional dissonance is positively related to impaired well-being and that political skill buffers this relationship. Thus, when emotional dissonance is high, politically skilled employees report higher psychological well-being than employees with low levels of political skill.

**Research/Practical Implications:** The results integrate the concept of political skill into research on emotional labor and provide evidence for political skill as yet another personal resource that can prevent the adverse effects of emotional labor. From practitioners' point of view employees' well-being can be facilitated by assigning tasks that require emotional labor to employees with high political skill.

### **O166: Job-Related and Personal Factors Influencing Emotional Intelligence in a Representative Sample of 3668 Greek Teachers**

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**Introduction:** Emotional intelligence has been widely investigated in different age, professional, and social groups, during the last decades. A variety of instruments for its assessment is available. The Wong and Law Emotional Intelligence Scale (WLEIS) is a popular self-report measure, designed to be used for self and other ratings. The present study aimed to investigate the correlation between teachers' emotional intelligence –as assessed by the WLEIS- and personal and work-related characteristics, in a nation-wide sample of pre-primary, primary and secondary educators.

**Methods:** Data were collected from a nationwide sample of 3668 educators of all levels and specialties, during a cross sectional study that took place in the second trimester of 2014. The participants voluntarily completed the questionnaire posted on the official and the main teachers' portals in Greece, following information on the study aims. Multiple linear regression was used to investigate possible associations of study variables with WLEIS subscales.

**Results:** Sample consisted of 1030 male and 2638 female teachers with mean age 43.4 years (SD=8.7). The mean score for "Self-Emotions Appraisal" was 6.1 (SD=0.8), for "Regulation of Emotion" 5.8 (SD=0.8), for "Use of Emotion" 5.8 (SD=1.0) and for "Others-Emotions Appraisal" 5.2 (SD=1.3). Multiple analysis for "Self-Emotions" and "Regulation of Emotion" revealed greater scores for women, older teachers and those that had support from their supervisors. Support from their supervisors and increased age was also associated with increased score on "Use of Emotion" and "Others-Emotions Appraisal" subscales. Additionally, married teachers, those with children and those with higher educational level had higher levels of "Use of Emotion". Support from colleagues was associated with greater scores on "Others-Emotions Appraisal". Furthermore, participants that had received training on Social Emotional Skills and Mental Health Promotion programs had greater scores on all emotional intelligence subscales.

Conclusion: Teachers' emotional intelligence could be significantly enhanced by training on socioemotional skills and mental health promotion, during their under graduate studies or during post-studies seminars. Additionally, seeing to it that supportive and helpful relations are built and maintained in the workplace could also help increase educators' emotional intelligence.

### **O167: An Occupational Portrait of Emotional Labor Demands and their Psychosocial Consequences for Workers**

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With service work now fundamental to developed economies, the management and display of emotions has become a pervasive occupational requirement for many workers—a type of work activity that Arlie Hochschild (1983) famously described as *emotional labor*. While the emotional labor literature has grown substantially over the last three decades, there remain notable knowledge gaps regarding the social distribution and well-being of emotional laborers. In this paper, we address these two gaps by merging a large nationally representative study of American workers with the Occupational Information Network (O\*NET) dataset—an online occupational database containing definitions and characteristics for a comprehensive set of occupations in the US. Using this combined individual-level and occupation-level dataset, we seek to 1) document variations in emotional labor requirements across the American occupational structure, 2) examine whether these requirements are unevenly distributed across workers, and 3) investigate potential psychosocial consequences associated with emotional labor.

Our paper is timely, since while there is increasing scholarly interest in emotional labor, research examining its psychosocial consequences has produced inconsistent findings (Grandey, Diefendorff & Rupp, 2013; Wharton, 1999). The performance of emotional labor is typically framed as a stressor that leads to worker burnout and reduced job satisfaction (Hochschild, 1983; Ashforth & Humphrey 1993). However, this view is complicated by some research that has found no evidence of health penalties among emotional laborers, and in some cases, evidence of higher job satisfaction among these workers (Wharton 1993). This inconsistent empirical evidence may be, in part, because the majority of emotional labor research to-date has relied on case studies of specific occupations, or comparisons among small numbers of occupations (Lopez 2006; Mahoney, et al. 2011). To our knowledge, studies examining the consequences of emotional labor demands across a wide range of occupations are rare or absent entirely. Beyond the design limitations of previous emotional labor research, few have considered how the psychosocial consequences of emotional labor may be contingent on workers' access to certain key job resources. However, leveraging insights from the Job Demands-Control model (Karasek, 1979), some have argued that job autonomy may be critical in shaping the ways that emotional labor demands contribute to reduced or improved occupational health (Wharton, 1993, 1999; Grandey, 2000). Informed by these predictions, we examine whether any psychosocial penalties that are associated with emotional labor demands are contingent on individuals' access to autonomous work conditions. Findings: We find no difference in the mental health of workers in occupations with higher emotional labor demands; however, among workers with autonomous work conditions, these demands are associated with an increased likelihood of job satisfaction and good general health. Among workers with low job autonomy the association between emotional labor demands and job satisfaction is reversed, such that workers in emotional labor-intensive occupations are less likely to report job satisfaction. Our findings confirm previous research that underscores the importance of job control in shaping the psychosocial consequences of emotional labor (Wharton 1993).



### **O168: Burnout and Depression Overlap in New Zealand Teachers**

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**Introduction:** Whether or not burnout is a depressive syndrome has been debated in the occupational health psychology literature. To date, the issue of burnout-depression overlap has mainly been addressed in North America and Europe. In the present study, we examined burnout-depression overlap in Oceania, looking for potential cultural variations in the way burnout and depressive symptoms are experienced and reported.

**Method:** A convenience sample of 184 New Zealand teachers took part in the present study (77% female; mean age: 43). Burnout was assessed with the Shirom-Melamed Burnout Measure (SMBM; 14 items; 1-7 scale) and depression with the 9-item depression module of the Patient Health Questionnaire (PHQ-9; 0-3 scale). The PHQ-9 allows the investigator to (a) grade the severity of depressive symptoms and (b) establish provisional diagnoses of major depression using a dedicated algorithm. Correlation and cluster analyses as well as analyses of variance (ANOVAs) were carried out.

**Results:** Burnout and depressive symptoms were strongly correlated ( $r = .73$ ; disattenuated correlation:  $.82$ ). In our cluster analysis, three groups of teachers emerged, identifiable as “low burnout-depression” ( $n = 56$ ; 30.4%), “medium burnout-depression” ( $n = 82$ ; 44.6%), and “high burnout-depression” ( $n = 46$ ; 25.0%). ANOVAs showed that the three groups differed from each other in terms of burnout and depressive symptoms (all  $ps < .001$ ), but not in terms of sex or age (all  $ps > .25$ ). Remarkably, all teachers reporting high frequencies of burnout symptoms (i.e., a mean score of at least 5.5/7.0 on the SMBM;  $n = 14$  [about 8%]) met the criteria for a provisional diagnosis of major depression.

**Conclusion:** We observed overlap of burnout with depression in New Zealand teachers, both dimensionally and categorically. The fact that 100% of the teachers categorized as “burned out” reported clinical levels of depressive symptoms is notable, despite the small size of the involved subsample. The present findings are in line with the recent results obtained in North America and Europe that question the distinctiveness of burnout with respect to depression. This study is consistent with the view that burnout symptoms are depressive in nature. Longitudinal studies relying on large samples of participants are needed to further investigate burnout-depression overlap across continents.

### **O169: The Changing Face of Incarcerated Women: Mental Health Workers' Stress and Burnout**

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Many report that incarceration on Earth is the highest in the U.S. (Walmsley, 2007). Within the United States, the faces of incarcerated populations are rapidly changing, in particular, among women who are incarcerated. Thompson and Loper (2005) report that in the last decade of the 20<sup>th</sup> century, the number of women inmates doubled to 94,000. By 2013, the number of females grew to 111,287 (Carson, 2013), and in 2014 was 112,961 (Carson, 2014). The percentage of inmates with serious mental health disorders is increasing, and is estimated at 73% of females (Gallagher, Carbonell & Gottfried, 2013). As a result, psychologists in women's correctional facilities must treat a greater number of inmates with a greater severity of mental illness. This presentation focuses on the resultant changing face of corrections, with a focus on inmates' mental health needs and the workplace stressors of those psychologists caring for them.

While increasing numbers of women are incarcerated in the US, very few prisons are equipped to handle the increase in terms of psychiatry and psychology, and very few mental health departments are staffed for the increase. Psychologists are placed in the role of supervising a range of clinicians (counsellors, social workers and marriage/family therapists) who have a variety of levels of training in psychopathology.

Further complicating the incarceration resulting from the inmate's crime, is the severity of the concurrent and generally pre-existing mental health disorder. Prison mental health workers are generally expected to counsel inmates with serious mental disorders, including severe psychoses, delusions, and sociopathy, without a corrections officer (guard) to protect them. Mental health workers face implications of increasing percentages of inmates with serious mental illness, and a lack of resources to implement appropriate interventions. As a result, the burden of high levels of stress and potential burnout for mental health workers and the psychologists supervising them is high. This presentation focuses on the implications of increasing caseloads, increasing severity of crime and increasing levels of mental illness, and methods for mental health workers to address the increasing needs while providing self-care for themselves.

### **O170: Profiles of a Short-time Burnout Change and Job-related Affective Well-being**

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Burnout is one of the most serious, adverse effects of prolonged occupational stress among employees. A job-related affective well-being, represented as a circumplex model of emotions, based on valence and arousal dimensions, may be an antecedent of burnout. Emotions are employees' response to different aspects of job, just like tasks, job conditions or interpersonal relations (with co-workers, supervisors or clients). As such, emotions also reflect the efficiency of an organisational system. Negative, especially low arousal, emotions can be an indicator of chronic occupational stress. In contrast, positive emotions may protect against stress and facilitate coping with it. Thus, the aim of the study was to explore heterogeneity of a short-term burnout change as well as to examine job-related emotions as possible predictors of this change.

One hundred and thirty-seven employees (50% white-collar workers, 62% women, age  $33.9 \pm 10.56$  years) completed an assessment of burnout (Oldenburg Burnout Inventory), and job-related emotions (Job-related Affective Well-being Scale-12), with subscales based on circumplex model of emotions (valence and arousal). Burnout was assessed twice, within six weeks on average, whereas job-related emotions were evaluated once, at baseline. Latent class growth modelling was used to analyse a change of burnout and its predictors.

Three latent classes of burnout change were distinguished: first group ( $n=27$ ) with low stable level of burnout, second group ( $n=75$ ) with medium stable level of burnout, and third group ( $n=35$ ) with high and increasing level of burnout. A mean level of burnout in the latter group was above a cut-off point for clinical burnout. Only negative emotions of low arousal appeared to be a significant predictor of a class membership. They were positively associated with high and increasing burnout and low stable burnout, but had no relationship with medium stable burnout. Classes of burnout change did not differ by gender, work type and job tenure.

It seems that arousal is essential to recognise a role of job-related affective well-being in burnout process. We suppose that low arousal negative emotions play a different role in non-burned out and burned out employees. Namely, they can be an indicator of low job satisfaction



among non-burned out employees, whereas among those who are clinically burned out, low arousal negative emotions can show a degree of personal resource depletion. Thus, an organisational system should serve both aims: well-being protection and resources recovery. Management practices to foster job satisfaction and to help restore employees' internal resources need to be conducted simultaneously.

### **O171: Quality of Work Life Scale: Development and Psychometric Properties**

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The quality of work life (QWL) is a complex and multidimensional construct. The QWL is defined as personal well-being perceived as a result of the satisfaction of needs that are important to the worker in the physical, psychological and social areas that allow a person to be happy and fulfilled and achieve their personal and professional expectations (Hornquist 1982; Calman, 1987; Ferrans, 1990).

The QWL exceeds the economic perspective and is located in the area of meeting the needs and human development; it is therefore a subjective well-being that includes aspects such as recreation, decent work, recognition, participation, knowledge, skills, habits and values for everyday life, a sense of life, among others (Salas & Garzón, 2013). The objective of this research was to develop a QWL Scale by natural semantic networks.

Method: Steps for constructing QWL scale: 1) Review of the literature; 2) Determination of factors and conceptual structure of the scale (Segurado & Agulló, 2002); 3) Determination of the psychological meanings of the QWL by natural semantic networks in a sample of 248 workers (Reyes-Lagunes, 1993); 4) Contrasting the results of the literature review and natural semantic networks; 5) Development of items and the QWL scale; 6) Scale piloting was with a sample of 673 workers of Mexican organizations; 7) In this research we make items analysis, reliability analysis, and construct validity through exploratory factor analysis and structural equation analysis.

Results: The QWL scale was structured with 16 factors in four groups: individual factors (F1 work-family balance, F2 job satisfaction, F3 development at work, F4 work motivation, F5 well-being at work), work environment factors (F6 conditions and working environment, F7 safety and health at work), factors of the organization and the work (F8 content and meaning of the work, F9 work remuneration, F10 autonomy and control at work, F11 labor stability, F12 participation in decision-making) and factors of the social environment (F13 interpersonal relations, F14 feedback, F15 recognition, F16 organizational support). Additionally, the scale includes an overall factor of QWL (F17).

Initially, the QWL scale was designed with 214 items. After piloting the scale, items analysis, reliability analysis, and factor analysis the scale was composed of 117 items. The results indicate adequate levels of validity and Cronbach's alpha values above 0.70. We conclude that the scale of QWL has adequate levels of validity and reliability, and is a scale with adequate psychometric properties to measure the QWL in organizations. PAPIIT IN304212

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## **O172: Developing a Measure of Emotional Intelligence for the Workplace**

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Emotional Intelligence (EI) is often used as a predictor of health in occupations that involve emotional labour and in health care professions. The results are mixed regarding the success of EI as a predictor in these occupations. In many cases self-report measures are used to assess EI. These measures may or may not follow the ability-based model developed by Mayer and Salovey, which identifies four emotional components: Perception, Understanding, Facilitation and Management. Different self-report measures of EI do not always correlate with one another or with the MSCEIT, which is thought to be different from self-report tests in that it does not measure perceived feelings or behaviours, but actual ability. Self-report measures are appealing because they are easy, fast, relatively inexpensive, and normally have face validity. Recently in the domain of personality, research has shown that referencing the self-report items to a work context improves the use of the personality measure as a predictor of work performance.

The object of this study was to initiate the development of an EI measure that conformed to the Mayer and Salovey ability model and was also referenced to EI in a work setting. Rather than starting *de novo*. We examined three published, self-report, ability-based EI measures: WLEIS (Wong & Law, 2002), SEIS (Schutte et al., 1998), and WSEI (Tett, Fox, & Wang, 2005). From the 208 items, 39 referenced EI in a work context, e.g., "I am able to anticipate how others will react to situations at work". Participants (N=281), adult workers, rated the EI items along with the MSCEIT, a five-factor measure of personality and a self-assessment of cognitive ability.

Exploratory Factor Analysis with maximum likelihood extraction placed the 39 items into seven factors; the first four factors corresponded to the four ability EI domains. The four factors accounted for 43% of the variance. The four highest loading items in each factor were then used to form a 16-item Work EI measure, which was next correlated with the MSCEIT, personality and cognitive ability measures. The four Work EI measures were highly correlated with each other ranging from .31 to .63. Therefore, we formed a composite from the four EI scales. The 16-item, Total EI measure correlated with the Total MSCEIT score,  $r = .29$ ,  $p < .000$ , and the branches of Facilitation,  $r = .24$ ,  $p < .000$ , Understanding,  $r = .20$ ,  $p < .02$ , and Management,  $r = .33$ ,  $p < .000$ . It did not correlate significantly with Perception,  $r = .10$ . The Total EI scale correlated significantly with all of the Big Five personality factors,  $r = .24$  to  $r = .45$ , raising concerns whether self-report measures are actually assessing EI. However, as expected, the Total EI measure did correlate modestly with our measures of cognitive ability,  $r = .25$ ,  $p < .000$ .

We used existing items as far as possible, but it appears that more appropriate workplace items are needed. These initial results are promising as the first step in the development of a measure of EI designed for the workplace.

## **O173: Psychometric Evaluation of the Norwegian Version of the Work-SOC Scale**

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Background and aim: Work-related sense of coherence (work-SOC) is a concept highly relevant for promotion of health and resources at the workplace. The aim of this study was to investigate the psychometric properties of the Norwegian translation of a nine-item measure of work-SOC with the dimensions comprehensibility, manageability, and meaningfulness.

**Method:** Cross-sectional work-SOC data, which were collected as part of the ARK intervention program, was used in the analyses. The sample consisted of 6951 employees from 16 Norwegian institutions relating to higher education, mainly universities and university colleges. Exploratory and confirmatory factor analyses were performed to investigate the factor structure of work-SOC, and to compare the goodness of fit of four different models.

**Results:** The confirmatory factor analyses showed that the theoretically assumed three-factor model had the best goodness of fit compared to a one-factor model, a two-factor model obtained from the exploratory factor analysis, and another three-factor model that had earlier been established with the German language version of the measure. The factors had good internal consistencies.

**Conclusion:** The preliminary results suggested that the work-SOC scale is applicable in Norwegian. Further investigations of the psychometric properties of the Norwegian work-SOC scale are under progress, including analyses of measurement invariance and construct validity.

### **O174: Enhancing Safety Preparedness of Young Workers**

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During the school-to-work transition young individuals face many challenges and changes in a relatively brief period of time, such as: developing occupational skills, and going through the organizational socialization process. Inexperience and lack of knowledge of job-related hazards may undermine occupational safety and wellbeing of young workers. Previous studies have shown that young workers are in elevated risk of workplace injury (Salminen, 2004). Experiencing occupational accidents or developing hazard-related disease early in life may influence the young workers work participation the rest of their working career.

It is important that young people entering working life are equipped with effective strategies and skills to support their occupational safety and wellbeing. Finnish Institute of Occupational Health has developed an intervention that aims to enhance occupational safety preparedness of young people entering working life. Safety self-efficacies with the confidence to implement the actions that support occupational safety comprises the first component of the preparedness. Safety self-efficacies are related to activities such as identifying job-related hazards and reducing the risk of work-related accidents. The process of inoculation against setbacks is the second component of preparedness, and is based on developing skills for anticipating issues that potentially undermine safety at work. In example, young people learn strategies how to act when encountering co-workers' risk behavior at the workplace or other unsafe work situations (such as, work machine or tool malfunctions). The educational intervention is based on principles of social learning (Bandura 1997), expectancy-value theory (Eccles et al. 1983) and earlier experiences with similar behavioral interventions (Vinokur et al. 1995; Vuori et al. 2008).

Eight secondary level vocational schools in Southern Finland and about 500 students are participating in a longitudinal cluster-randomized effectiveness trial during the years 2015-2018. Half of the student groups in each school are randomized into experimental condition and the other half into control condition. All study participants are assessed using questionnaires at baseline and immediately after the intervention. This presentation presents the immediate beneficial effects of the intervention on safety preparedness among study participants.

### **O175: Maintaining Student Well-being during the Exam Period: A Randomised Controlled Trial Using an Evaluative Conditioning Procedure**

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Evaluative conditioning is a form of Pavlovian conditioning that refers to changing preferences (likes or dislikes), and its effectiveness has consistently been demonstrated. The objective of the present research is to evaluate the effectiveness of an evaluative conditioning procedure on student well-being, during the exam period. To achieve this goal, 76 undergraduate students (9 males) were randomly assigned to a control group or an intervention group. All students had to complete a neutral task (the control group) or an evaluative conditioning task (the intervention group), each day of the first two weeks of the exam session. The control group had to classify neutral and positive stimuli. Using the same stimuli as the control group, the task of the intervention group was to pair the positive stimuli with self-relevant stimuli (e.g. I, me, myself). Dependent measures were self-reported self-esteem, self-reported academic engagement, and self-reported academic burnout. All participants completed the dependent measures in day 7 and day 14 of the trial. On average, we had a 22.3 hours time lag between the last evaluative conditioning task and the completion of the dependent variables. In day 7, the intervention group reported significantly higher dedication and feelings of personal accomplishment, and significantly lower depersonalization, as compared with the control group. After two weeks, we have found significant differences on most dependent variables, between the two groups. As compared with the control group, the intervention group reported higher self-esteem, feelings of personal accomplishment and academic engagement, and lower levels of depersonalization. We did not obtain a statistical difference between the two groups regarding emotional exhaustion.

### **O176: Mindful Working: Effects of an 8-Week Corporate-Based Mindfulness Intervention**

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**Purpose:** The benefits of mindfulness meditation for human well-being have been studied in many different clinical settings. However, less is known about its effectiveness in the workplace for both employee well-being and organizational attitudes and behavior. The current study examined the effects of an 8-week Corporate-Based Mindfulness Training (CBMT) in a Dutch Airline Company. We expected positive effects of the intervention on individual well-being outcomes, namely mindfulness, affective well-being, rumination, self-compassion, stress and physical complaints. Further, we expected positive effects on organizational attitudes and behavior, namely meaning-making, other-compassion, adaptivity, in-role performance and organizational citizenship behavior (OCB).

**Method:** Sixty-four employees of a Dutch Airline Company were invited to participate in the study. Of this group, 51 employees completed surveys before and after the CBMT intervention as well as a follow-up measure 2 months later. The intervention group consisted of 32 employees; 19 employees represented the control group. Participants' job functions varied from administrative assistants to general managers. The intervention consisted of 8 weekly group sessions in combination with mindfulness exercises to practice at home daily.

**Results:** Repeated measures ANOVA's showed significant positive effects on mindfulness, self-compassion, affective well-being (i.e. positive emotions), stress, physical complaints and meaning-making for the intervention group as compared to the control group. The effects of the intervention on compassion for others, OCB, performance and adaptivity were not significant.

Additionally, compared to employees who practiced less than five times a week, those who meditated five times per week or more showed reduced stress and higher scores on mindfulness, compassion towards others, and in-role performance.

Discussion: The present study shows that an 8-week mindfulness intervention adapted to the workplace fosters a host of employee well-being outcomes. The intervention significantly increased employees' mindfulness, positive emotions and self-compassion, and decreased stress levels and physical complaints. Regarding effects on organizational attitudes and behavior (i.e. meaning-making, compassion towards others, OCB, in-role performance and adaptivity), our study emphasizes the importance of regular practice, since the intervention only increased other-compassion and in-role performance for participants who practiced more than five times a week or more. Implications and suggestions for future research are discussed.

### **O177: StressPrevention@Work: a Strategy to Manage Work-Related Stress Including a Digital Portal, a Stepwise Approach and Learning Networks**

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Work-related stress is associated with common mental health disorders, such as depression and anxiety, which in turn largely contribute to sick leave and work disability. Furthermore, earlier surveys have shown an increase in self-reported work-related stress over the years; an indication that this problem should be addressed. Effective interventions are available, but not widely used within organisations. In this study, we hypothesise that the implementation of an integral stress prevention strategy will reduce work-related stress in employees. The Stress Prevention@Work strategy consists of: (1) a stepwise work-related stress prevention approach, (2) a collaborative learning network, and (3) a low threshold information technology (IT) platform. This abstract aims to describe the study evaluating the effectiveness of this integral stress prevention strategy.

In a four year project, in year 1 (2014) a website and an online-platform are developed, particularly the latter accommodates organisations as well as individual workers to follow a step-wise procedure to manage work-related stress. In year two (2015) a pilot is organised and the digital platform will be further improved. In the third year (2016) the trial will be held in a large educational organisation and in a large health care facility.

In the presentation an overview of the project will be provided as to date, as well as a state of the art presentation of where we are now in the trial. There are no results from the trial yet, but results mainly reflect the findings of the pilot and the functionalities of the digital portal can be illustrated.

### **O178: Gender Stereotypes in Health Professions**

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Historically, in all societies, the rule is that men obtain the superior social and professional posts. There is no exception for this "schema" for any kind of society. According to Hartman (1976), paternalism is a result of the manner by which the social group of men is organized with. This group has managed to establish, using coordinated manipulations, the isolation, division, and inequality of females, resulting to financial dependence of women. On the other hand, by isolating women, men have managed to project their interests, with systematic fights

in labour market, and also in the fields of justice, political parties, culture, and ideology. Male camaraderie and their coordinated collective action is revealed in relevant research and analysis (Walby, 1986). Male involvement is reflected in a multitude of phenomena, such as social institutions and social stratification. There is no room for collective resistance by women, in order to obtain gender equality, or at least minimization of above phenomena (Stafilas & Zahou, 2008).

During the development of societies, the meaning of sex, the social category of sex, is gradually transformed into a dynamic social category (social gender), consequently, expectations of social environment are influenced. Social gender refers to the social action group, to social status, social institutions, sociocultural symbols, and social identity without taking into account "biological difference" as an analytical category (Kaberidou, 2010). In modern societies, the construction of "male" and "female" fields of employment constitutes a manifestation of social power's systems' stabilization: of capitalistic way of production and social hierarchy of gender, where male gender is the dominant (Stratigaki, 1996).

Research shows that inequalities between men and women in employment are interpreted as a consequence, as a transcription in the financial sector, or even as reproduction of gender inequalities in family. This type of analysis allowed, without a doubt, to highlight many kinds of discriminations between men and women in the field of employment (Maruani, 2008). In the health profession, the paternalistic prototype which dominates in the relationships between doctors and nurses, is considered of special importance. This "schema" represents older times but it is still witnessed even today. Another important phenomenon observed in health professions is that of "glass ceiling". It seems that women who are employed in health professions are not "saved" from the general trend of the labour market, which delays their professional progress and their advancement in the hierarchy. On the other hand, horizontal segmentation of the labour market tends to accumulate higher percentages of women in traditional "female" occupations, such as that of a nurse, and higher analogies of men in traditional "male" professions such as that of a doctor (Garifallou et al., 2009; Sweet & Norman, 1995; Tranda, 2007).

This particular study enriches existing research with data from participatory observation. This data was analysed in themes by the researcher who has experience of working in hospitals for the last 23 years. This experience is discussed here with the aim to better understand the issue and to contribute to the advancement of science.

### **O179: Neurodiversity - Autism and Work**

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Our research approach is based on the theory of neurodiversity, a concept with footholds in neuroscience, evolutionary psychology and other fields, which considers autism a regular variant of the human brain. Regarding individuals with autism as solely impaired or deficient would discount their strengths and capabilities. We conducted two studies to shed some light into the working world of individuals with autism and in order to pave the way for their integration into the job market.

The first study provides an overview of the strengths of individuals with autism. We interviewed 136 individuals with autism and 155 neurotypical individuals via an online survey about occupational strengths. The comparison of both groups in cross-tables showed that the indicated strengths differ in several areas ( $\Phi_{\text{Cramer}} = .02 - .47$ ), which means that a specific strength profile can be derived, and this profile goes beyond the clinical view of the diagnostic criteria.

Furthermore, in a second study, we wanted to identify expected and occurred barriers preventing individuals with autism from entering the job market and staying in the job as well as to identify the solutions to overcome these barriers. Sixty-six employed individuals with autism - 17 of them with autism-specific employment - participated in an online survey. Results showed a variety of possible barriers. Individuals in autism-specific employment named formality problems most frequently while individuals in non-autism-specific employment mentioned social problems most. In terms of solutions, both groups used self-solutions as much as external help, but a more specific categorization of their responses showed important differences. Additionally, general and occupational self-efficacy was higher in participants in autism-specific employment while comparisons regarding life or job satisfaction showed no differences.

#### **O180: Does a Job Promotion Affect Men and Women's Health Differently? Dynamic Panel Models with Fixed Effects**

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**Background:** Few studies have to date examined if a change in occupational status is associated with a change in health. Furthermore, very little is known about if this association differs by sex.

**Methods:** Data were derived from four waves (2008-2014) of the Swedish Longitudinal Occupational Survey of Health (SLOSH), a follow-up study of a nationally representative sample of the Swedish working population, comprising 1410 men and 1926 women. A dynamic panel model with fixed effects was used to analyse the lagged association between job promotion on the one hand and self-rated health (SRH) and symptoms of depression on the other. This method allowed controlling for unobserved time-invariant confounders as well as determining the direction of causality between the variables. Multigroup comparisons were performed to investigate differences between sexes.

**Results:** The results showed that a job promotion was associated with decreased subsequent SRH and increased symptoms of depression among both men and women. SRH and symptoms of depression were not associated with a subsequent job promotion. There were significant differences between sexes, such that men reported worse SRH and more symptoms of depression following a job promotion compared with women.

**Conclusions:** The present study suggests a causal relationship between a job promotion and decreased SRH and increased symptoms of depression respectively and no reverse causality. Men furthermore appear to fare worse from a promotion than women, at least in a representative sample of the Swedish working population.

#### **O181: Investigating the Factorial Structure and Availability of Work Time Control in a Representative Sample of the Swedish Working Population**

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**Introduction:** Two aspects of work time control (WTC) can be distinguished: an individual's autonomy regarding the duration of the working day (number of hours worked and start and finish times) and the distribution of working time (taking work breaks and vacation). We examined whether this structure, often neglected in past research, can be seen in a representative sample of Swedish workers.



Differences exist in the degree to which workers have control over their working time. Women and shift workers have often reported low control over daily hours and time off. In regard to age and family situation, findings are inconclusive. Research on the availability of WTC is scarce and this matter has not yet been examined in a representative sample of the working sector.

**Aims:** The present study aimed to:

- (1) replicate the two-dimensional structure underlying WTC (control over daily hours and control over time off),
- (2) investigate differences in the levels of control by gender, age, family situation, occupational sector, and work schedule.

**Methods and Materials:** The study was based on the 2014 data collection of the Swedish Longitudinal Occupational Survey of Health (SLOSH;  $n = 14\,974$ ) which is a follow-up of a representative sample of the Swedish working population. WTC was measured using an adapted 6-item index developed by Ala-Mursula et al. [1] We assessed the structure of the WTC measure using exploratory and confirmatory factor analysis. Differences in WTC by work and demographic characteristics were examined with independent sample t-tests, one-way ANOVAs and gender-stratified logistic regressions.

**Results:** The best model fit was found using 5 items of the WTC measure and a two-factorial structure that distinguished between control over daily hours and control over time off ( $RMSEA = .06$ ; 95% CI .04 to .09;  $CFI = .99$ ). Women, shift and public sector workers reported lower control in both factors. Age showed small associations with WTC while a stronger link was suggested for civil status and family situation. Night, roster and rotating shift work were the most influential factors on reporting low control over daily hours and time off.

**Conclusion:** Our findings argue for analysing WTC under consideration of two, distinguishable factors: control over daily hours and control over time off. Future research should avoid assessing WTC with a single item or index score. The two factors may have differential effects on outcomes such as health and work-life interference. In our study, women, shift and public sector workers reported lower levels of control over daily hours and time off. Public health implications should be examined in future research, in particular if increased levels of either factor of WTC can ameliorate health problems associated with unfavourable working schedules.

## **O182: Does Control Buffer Negative Effects of Time Pressure on Employee Well-Being? - The Role of Demand-Resource Match**

Barbara Stiglbauer

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**Introduction:** According to the Job Demand-Control (JD-C) model, job control is an important job resource which is capable of buffering detrimental effects of job demands on employee health and well-being. However, empirical evidence for the buffer hypothesis is inconclusive, which might be due to the very broad operationalization of the constructs resulting in a lack of "match" between the type of job demand and job control. Moreover, it has also been argued that the buffer hypothesis might hold for employees with certain personality characteristics only.

**Aim and hypothesis:** The presented study explores the role of "match" with regard to the buffer hypothesis proposed by JD-C model. It is hypothesized that the relation between time pressure and employee well-being will be more likely to be buffered by job control in the case that a) the type of job control matches the type of job demand (i.e., control over timing/scheduling vs. control over other aspects at the job) and b) the amount of job control matches employees' control beliefs (i.e., internal vs. external locus of control).

**Method:** The hypothesized three-way-interaction between time pressure, job control, and locus of control on employee well-being was investigated in a sample of 206 employees. Information about the variables was collected at two time points at an interval of five months by means of an online survey.

**Results:** As expected, the three-way-interaction was significant only in the case that the type of control matched the type of job demand. Put differently, only control over timing/scheduling (but not control over methods or decision-making) moderated effects of time pressure on well-being. Moreover, job control was particularly important for employees with an external rather than internal locus of control. Thus, time pressure had a negative longitudinal effect on well-being only in the case that both job-related control and personal control beliefs were low. Furthermore, the beneficial effect of match between job-related and personal control particularly unfolded in the case that time pressure was low. Finally, curvilinear effects demonstrated that, overall, medium levels of time pressure and control were most beneficial for employees' well-being.

### **O183: The Moderating Role of Work-Related Smartphone Use in the Day-Specific Link between Self-Control Demands and Employees' Well-Being**

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**Purpose:** Recent research on occupational stress and health has identified self-control demands (SCDs) as a major stressor. SCDs require inhibiting, controlling or overriding spontaneous and automatic reactions, urges, emotions and desires that would otherwise interfere with goal-directed behaviour at work. The limited strength model of self-control suggests that different acts of self-control draw on a common limited regulatory resource and that depletion of this resource can manifest in impairments of psychological well-being.

Previous studies have provided strong evidence for the adverse effects of SCDs and have raised the question whether person-specific or work-related conditions might influence these relations. In particular, the simultaneous coping with SCDs and boundary conditions which also require self-control may lead to impaired psychological well-being by overtaxing the limited regulatory resource and preventing its recovery.

Due to the increasing work-related use of modern communication technologies such as smartphones at home, we propose day-specific work-related smartphone use as a boundary condition that may strengthen the adverse impact of SCDs on well-being. Integrating the effort-recovery model and the limited strength model of self-control, we suggest that smartphone use directly depletes regulatory resources. Moreover, the prolonged work-related effort associated with smartphone use prevents employees from mentally disengaging from the workplace, thus impeding the recovery of the limited regulatory resource. Consequently, the relationship between SCDs and well-being is expected to be stronger on days with high levels of work-related smartphone use compared to days with low levels of work-related smartphone use.

**Design/Methodology:** We conducted a diary study, in which 117 employees responded to daily questionnaires over 10 consecutive work days, assessing SCDs at noon and work-related smartphone use as well as ego-depletion and need for recovery as criterion variables in the evening.

**Results:** The results demonstrate that day-specific SCDs impair day-specific indicators of well-being and that work-related smartphone use indeed strengthens these relations: On days with high SCDs as well as intensive smartphone use in leisure time, employees report lower levels of well-being compared to days on which employees use their smartphones less frequently.

**Research/Practical Implications:** As work-related smartphone use can be influenced by both the organisation and the employee, our research might offer broad opportunities to protect employees from the adverse effects of SCDs. From an individual's point of view, employees should refrain from smartphone use in the evening on days on which they have already faced high SCDs. Moreover, organisations could establish guidelines or restrictions on the use of technologies for work while at home.

**Originality/Value:** In our study, we focus on the interplay of new work demands such as SCDs and work-related smartphone use. The use of diary studies in this context sheds light on the intra-individual processes that underlie these relationships. Our results support former findings on the adverse effects of SCDs on well-being. Moreover, we demonstrated that day-specific work-related smartphone use further strengthens the adverse effects of SCDs.



## **P1: Balancing Performance and Employee Well-being across Distances: A New Tool to Distance Managers**

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In the global community it is common that corporate departments work across distances like time, geography and culture. One challenge that leaders in charge of such teams face is difficulties regarding employees' well-being and team performance. The aim of this study was to design a participatory tool to leaders within this field to support their development in distance management.

The study applied a divergent and convergent approach (Parners, 1992) to examine the main challenges in distance management. The method consisted of three phases; each with a divergent and a convergent sub phase. In each divergent phase, a question was raised to explore the subject and potential solutions. In each convergent phase, the questions were answered based on theories and/or collected data. The three questions addressed in our study were as followed:

- 1) What are the central problems concerning distance management?
- 2) What would characterize a tool that could support and develop distance managers?
- 3) How could the tool be specified to benefit distance managers and employees?

Distance management literature and data collected in five large Danish engineering companies provided the basis to identify the central problems. Three interviews were conducted with three managers and eight interviews with employees working on the distance. The outcome of clustering the data was three central problem areas: Rumors as a consequence of missing communication, employees' feeling of isolation and internal conflicts affecting the performance of employees.

In the next phase, we examined possible solutions for making an educational tool through a variety of idea generation methods (Cross, 2000). We sorted ideas based on criteria like: the ability to knowledge share and to do team work. We decided that an educational strategic board game would have the best potential for success as an educational tool using active learning and co-creation. In the final phase of the study, the tool was specified using a program development approach. The final outcome of the study resulted in a game specification building on an epidemic board game where distance managers play as a team. The game has been tested with a distance management consultant. The results of the test lead to changes regarding the implementation of discussion elements.

The game is played by three to six distance managers with duration of approximately two hours. The players are confronted with issues related to the previously identified central problem areas, and will be educated by self-reflection, knowledge sharing, and discussing possible solutions. The game can only be won if the distance managers are able to work as a team, which underlines an essential solution in distance management. The challenge of the tool is balancing education and entertainment during playing the game.

## **P2: How does Authentic Leadership Promote Optimal Functioning at Work? The Mediating Role of Employee Motivation**

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Recently, authentic leadership (AL; Luthans & Avolio, 2003) has been identified as a key factor that has the potential to not only promote employees' work engagement (Bamford, Wong, & Laschinger, 2013; Giallonardo, Wong, & Iwasiw., 2010; Wong, Laschinger, & Cummings, 2010)

but also prevent burnout (Laschinger & Fida, 2014; Laschinger, Wong, & Grau, 2011; Lee & Cummings, 2008; Zopiatis & Constanti, 2010). AL theory proposes that leaders can instill in followers positive outcomes (and protect them from negative ones) by being much more than just being true to oneself. It has been conceptualised in terms of four distinct dimensions: self-awareness, relational transparency, balanced processing, and internalised moral/ethical perspective. However, despite growing evidence that AL has motivational potential leading to adaptive and maladaptive consequences for employees, the role of work motivation has not been fully investigated.

Building on the self-determination theory (SDT; Deci & Ryan, 1985, 2008), the present study examines the mediating role of employee motivation in the relationship between authentic leadership and work engagement (i.e., vigour) and burnout (i.e., emotional exhaustion). We propose that the four AL dimensions positively relate to work engagement but negatively relate to burnout through two motivational processes: autonomous (in which employees act with volition) and controlled motivation (in which they act under internal or external pressure).

This study was conducted among a sample of 311 Canadian workers (34.41 % male; response rate was 27.76%) from a broad cross-section of job types in the retailing and manufacturing industry (20% management; 18% customer services; 20% operations). Exploratory Structural Equation Modeling (ESEM; Asparouhov & Muthén, 2009) results showed that AL relates to work engagement and burnout mainly through autonomous motivation. Specifically, three of the four AL dimensions (i.e., self-awareness, moral perspective and balanced processing) were positively associated with autonomous motivation, which in turn predicted work engagement ( $\beta = .64, p < .001$ ) and burnout ( $\beta = -.22, p < .001$ ). None of the four AL dimensions was related to controlled motivation which also predicted work engagement ( $\beta = -.17, p < .05$ ) and burnout ( $\beta = .26, p < .001$ ). Theoretical and practical implications will be discussed in light of AL theory (Luthans & Avolio, 2003) and SDT (Deci & Ryan, 2000).

### **P3: Mindfulness and Compassion: The Impact on Engagement and Performance**

Sandra Miralles Armenteros, Ricardo Chiva Gómez, Alma María Rodríguez Sánchez  
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Compassion can be surprising as it may emerge where it is least expected. The objective of the current study is to show the relationship among mindfulness, compassion, engagement and academic performance. In the context of the self-determination theory we hypothesise that mindfulness is positively related to academic engagement and that this relationship can be mediated by compassion. Furthermore, we considered that both mindfulness and compassion do not directly affect performance, but have an indirect effect, specifically through engagement. The sample consists of 210 students from the last years of business administration degree and a labour relations and human resources degree of Universitat Jaume I (Castellón – Spain). Specifically, this study was conducted with students who will probably end up taking a position as a manager or leader in organisations. They will be responsible for managing the performance of employees and identifying the physical and psychological problems that may arise. Structural Equation Modeling reveals that compassion partially mediates the relationship between mindfulness and academic engagement and consequently academic performance is increased. Finally, we discuss how these findings clarify the role of mindfulness on compassion in the academic world and highlight the implications for the literature on engagement and academic performance.

#### **P4: When does Psychological Detachment from Work during Off-Job time Predict Engagement and Burnout? The Moderating Role of Autonomous Motivation.**

Stéphanie Austin, Claude Fernet, Julie Côté

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Research on recovery experience frequently demonstrates that psychological detachment from work impacts employee well-being. Precisely, psychological detachment during off-job time relates to engagement when being at work (Sonnentag, Mojza, Binnewies, & Scholl, 2008), whereas lack of psychological detachment during off-job time contributes to increased levels of burnout (Söderström, Jeding, Ekstedt, Perski, & Akerstedt, 2012; Sonnentag, Binnewies, & Mojza, 2010). Although interesting, less research has been conducted on the individual differences that may explain such relationships.

Self-determination theory (SDT, Deci & Ryan, 2002), which provides a theoretical framework for understanding employee's inner motivational resources (Gagné & Deci, 2005), proposes that autonomous motivation makes employees act from their deep values, goals, interest, and/or satisfaction, and therefore, is associated with optimal functioning. Examples of positive outcomes are energy maintenance and enhancement (Nix et al., 1999; Ryan & Deci, 2008), work commitment (Fernet, Austin, & Vallerand, 2012) and engagement (Trépanier, Forest, Fernet, & Austin, 2015). In contrast, controlled motivation or nonautonomously motivated actions are enacted by internal (i.e., out of guilt or shame) or external pressure (i.e., demands, threats or rewards from an external agent) and are linked to manifold negative outcomes, including job burnout and psychological distress (Fernet, Trépanier, Austin, Gagné, & Forest, 2015). Accordingly, we hypothesise that psychological detachment from work during off-job time is highly relevant for the psychological functioning of low autonomously motivated employees since they experience their work efforts as more controlling and draining than those employees who are autonomously motivated.

Considering employee motivation (Fernet, Guay, & Senécal, 2004; Fernet, Austin, & Gagné, 2010) as a potential moderator, we investigated whether temporarily disengagement from work (i.e., psychological detachment from work during off-job time; Sonnentag & Bayer, 2005) is equally important to all employees in preventing emotional exhaustion (core dimension of burnout), as well as in nurturing vigour (core dimension of work engagement).

The study was conducted among nurses in part, because they generally work 12-hour day or night shifts, regularly combined with unplanned overtime (Geiger-Brown & Trinkoff, 2010), which can be insufficient for effective work detachment between scheduled work. In total, 340 nurses (88% women) completed the study questionnaire. Mean age was 27.4 years ( $SD = 7.14$ ) and most held a permanent position (77%). In line with our hypothesis, regression analyses showed that employees' motivation and psychological detachment from work jointly predicted nurses psychological ill- and health-related functioning. As expected, a significant interaction effect between work motivation and emotional exhaustion was found, suggesting that less autonomously motivated nurses benefited more from psychological detachment ( $-.31$ ) than more autonomously motivated ones ( $-.22$ ). In addition, an interaction effect was found between work motivation and vigour, suggesting that only less autonomously motivated nurses benefited from psychological detachment ( $.26$  vs.  $.04$  n.s. for more autonomously motivated ones). No interactions effects were found between psychological detachment and controlled motivation in the prediction of exhaustion and vigour. In all, these findings suggests that employees who highly value their job would greatly benefit from recovery experiences. Implications for recovery research and management practices will be discussed.



## **P5: Is it Possible to Build Work Engagement with Job Resources? A Person-Centered Approach to Interventions**

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**Introduction:** On the basis of theoretical assumptions, job resources are expected to boost work engagement. However, as intervention studies on work engagement are scarce, there is a lack of evidence showing how effective job resource-based interventions are in increasing work engagement, and whether this improvement lasts over time. This research aimed to investigate the effectiveness of a work engagement intervention based on increasing job resources, from a person-centered perspective. Specifically, the purpose was to identify different developmental patterns (i.e., latent classes) of work engagement during the intervention (five months), and to explore whether the possible increases in work engagement are related to the possible increases in job resources, and whether the positive changes remain over time (five-month follow-up). A further aim was to identify the demographic differences (e.g., age, gender) between the developmental patterns, in order to determine what types of individuals benefit most from the intervention.

**Methods:** The intervention was conducted by utilizing a quasi-experimental design with a control group. Altogether 87 employees from two different organizations (banking and administrative sectors) participated in the intervention, and 80 employees from another two organizations (also from the banking and administrative sectors) acted as controls. The participants responded to the questionnaire three times during the intervention: Two weeks before, and two weeks and five-months after the intervention (response rate 62-83%). The control group responded to the questionnaire twice: Two weeks before (response rate 56%) and two weeks after the intervention (response rate 53%). We utilized growth mixture modeling (GMM) to identify the developmental patterns for total work engagement. The demographic differences and the differences between the job resources of each work engagement class will be studied by using variance analysis and the chi-square test.

**Results:** GMM analyses revealed three different latent classes of work engagement among the participants, and two classes among the controls. Among the participants, the levels of work engagement remained very high ( $M = 5.8$ , 14%) or high ( $M = 5.1$ , 63%) in two classes throughout the ten-month period. However, we also found a class (23%) in which work engagement was initially moderate ( $T1$ ,  $M = 3.9$ ), but its mean level decreased during the intervention period ( $T2$ ,  $M = 3.0$ ) and then remained at this lower level ( $T3$ ,  $M = 3.4$ ). Among the controls, the levels of work engagement remained the same ( $M = 5.3$ , 72%;  $M = 3.7$ , 28%). The results of the differences between the demographics and job resources of the different work engagement classes will be presented.

**Conclusions:** This study showed that despite the intervention, work engagement remained highly stable over time in two classes. However, we also found a third class, in which, contrary to expectations, work engagement decreased during the intervention period. Before further conclusions, it is important to note that during the intervention, participants faced enormous organizational changes, such as massive organizational restructuring. The next aim is to investigate the differences between the demographic factors and the job resources of these different work engagement classes.

## **P6: Managing the Emotional Demands of Caring: the Role of Trait Mindfulness in Health Care Assistants**

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The increasing proportion of elderly people that requires institutional and community-based care highlights the need for high-quality care providers. There is evidence, however, that health care assistants (HCA) experience a range of occupational and organizational demands, such as: high workloads, patient demands, physical/verbal abuse, and poor terms and conditions of employment. Many HCAs find their work emotionally demanding, which can have serious implications for their wellbeing and job performance.

Mindfulness has been described as "awareness and attention to present events and experiences". There is growing evidence that mindfulness interventions have strong potential to enhance health and wellbeing in occupational setting, particularly within the health and social care professions. The present study examines the role played by trait mindfulness, conceptualized as a naturally occurring tendency to live in the present moment, in the relationship between emotional demands and two outcomes: perceived stress and life satisfaction. As well as main effects, it is argued that mindfulness might play a moderating and/or mediating role and protect HCAs from the negative impact of emotional demands on wellbeing. As experience in health and social care work has been found to relate to work-related stressors and strains, the length of time employed in HCA work is also considered.

Emotional demands were significantly associated with both stress and life satisfaction ( $p < .001$ ). HCAs who reported a higher level of trait mindfulness tended to see their work as less emotionally demanding and perceive less stress and more life satisfaction. Experience in the HCA role was not significantly related to any of the study variables. Moderated regression analysis found no evidence that trait mindfulness buffered the relationship between emotional demands and either stress or satisfaction. Bootstrapping analysis, however, found some evidence for trait mindfulness as a potential mediator of the relationship between emotional demands and stress. The findings suggest that interventions based on mindfulness principles may be useful in improving the work-related and general wellbeing of HCAs.

## **P7: The Impact of Death Reminders in the Workplace on Productivity, Self-Esteem, and Wellbeing: A Terror Management Perspective**

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Using a terror management framework we examine the influence of death reminders in the workplace on self-reported productivity, self-esteem, and wellbeing. Terror management theory posits death reminders spur people to achieve cultural value and bolster self-esteem. Many people glean these feelings of cultural and self-value from their occupation, and recent research suggest death reminders can indeed prompt an increased desire to work (Yaakobi, 2015). We advance this research direction by using a repeated measures field study in an office environment in which mundanely appearing death reminders are varied over a period of three weeks. We assess the impact of these variations on self-reported productivity, self-esteem, and wellbeing. Findings are discussed with regards to often overlooked features of the everyday workplace environment and policy implications.

## **P8: Effect of Psychosocial Risks (Mobbing and Burnout) in Job Satisfaction**

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Work psychosocial risks are facts, events, situations or states as a result of the organization of work, which have a high probability of affecting the health and occupational health of workers. Psychosocial risks have a high probability of damaging the physical, psychological, social and mental health of workers. The most important psychosocial risks are mobbing, stress and burnout.

The burnout is considered the biggest factor that causes psychological harm labor in recent times (Bresó, Salanova, Schaufeli and Nogareda, 2008). The burnout syndrome is defined as a state of physical, emotional and mental exhaustion as a result of which the worker is exposed for long periods to multiple demands at work (Malakh-Pines, Aronson and Kafry, 1981). Maslach and Jackson (1981) define burnout as a syndrome characterized by emotional exhaustion, depersonalization and low personal accomplishment and often occur in people working in contact with users.

Meanwhile, mobbing is a gradual process scale (Einarsen, 1999). Mobbing is the set of continuous negative behaviors that are directed against one or more workers by their superiors and/or coworkers. These actions, unwanted by victims can be made deliberately or intentionally causing humiliation, offense and stress both the victims and those who witness it, and cause a negative impact on work performance, and cause a negative environment work (Einarsen and Raknes, 1997).

The objective of this research was to identify the significant effect of burnout and mobbing in job satisfaction. The research was cross-sectional and ex post facto with a non-experimental design. The sample was stratified and proportional, composed of 153 employees of a government institution. Burnout was measured using the Scale of Burnout of Uribe (2010), the Scale of mobbing of Uribe (2012), and the Scale of Job Satisfaction of Lopez (1994). Structural equation analysis was performed to determine the effect of burnout and mobbing in job satisfaction, the results indicate a proper fit of the data to the model.

The results indicate a significant negative burnout and mobbing in job satisfaction. These results indicate that organizations must continually assess the presence of psychosocial risks and design protocols for intervention to prevent and avoid effects of burnout and mobbing in the occupational health of workers. It is also necessary to determine the psychosocial risk factors that are associated to psychosocial risks such as burnout (psychosocial stressors) and bullying (mobbing psychosocial factors) to prevent its consequences. PAPIIT-UNAM-Mexico project: psychosocial and organizational impact on Mexican workers occupational health factors.

## **P9: Working with the Public: A Diary Study of Beneficiary Contact, Social Worth and the Mediating Effect of Prosocial Impact among Emergency Workers**

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Does daily contact with the public promote perceptions of social worth for emergency workers? This research examines the relationship between daily beneficiary contact, prosocial impact and perceptions of social worth for emergency workers. We predicted that daily perceptions of beneficiary contact are positively associated with daily perceptions of social worth, and that this relationship is mediated by daily perceptions of prosocial impact.

A diary survey was distributed to members of an emergency service organisation (N= 84) who completed the survey over five days. A general survey was used as a control while a diary survey was employed to allow for expected daily fluctuations in perceptions of the focal constructs. Results of multilevel SEM supported our hypothesised daily relationships when controlling for prosocial impact, social worth and job role at the general level. Specifically results show that, on a given day, beneficiary contact is positively associated with perceptions of social worth. Furthermore our results found that this day-level relationship is fully mediated by prosocial impact.

Our findings highlight the benefits of regular contact with beneficiaries for employees within the emergency services. Specifically, firefighters and paramedics are more likely to feel that their work makes a difference to others and is valued by others on days when they have the opportunity to meet the people who benefit from their work. Therefore organisations are advised to enhance opportunities for beneficiary contact. This improves employee well-being and performance, can lead to improvements in organisational outcomes, and is ultimately beneficial to the service user.

This is the first study, to our knowledge, to examine the benefits of daily beneficiary contact for emergency workers. In doing so, our findings demonstrate how beneficiary contact on a given day increases perceived social worth for that day through the mediating mechanism of perceived prosocial impact. Further research might attempt to elucidate beneficiary contact with reference to temporal, initiatory and proximal dimensions. It would be valuable to study the collective effect of the focal constructs among groups of emergency workers. Research on alternative mediators, such as gratitude, trust and meaningfulness, would also be worthwhile. The results of this research should also be examined in a non-emergency environment where employees also have interaction with beneficiaries (e.g. teachers, customer service, sales etc.), to establish whether the positive effects of contact hold for alternative types of beneficiaries (e.g. students, customers etc.).

#### **P10: The Moderating Role of Job Control in the Relation between Job Stressors and Counterproductive Work Behaviors: A Study among Italian and Polish Employees**

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Introduction: Counterproductive work behaviors (CWB) are defined as intentional and justified, from the actors' perspective, as behaviors that are undertaken by employees with the intent to harm the organization (e.g., theft, sabotage, production deviance) or its members (e.g., workplace aggression, mobbing). CWB are presented in the literature as either a form of retaliation or a form of a coping with high job demands. Regardless of the theoretical context, a significant role in forming of CWB is attributed to job stressors and job control (JC) (Fox et al., 2001). The results of several studies have confirmed the positive relationship between job stressors and CWB as well as the moderating effect of JC in this relationship. There are suggestions, however, that experiences of CWB may differ across countries due to different beliefs, norms, and values within the countries (Coyne et al., 2013).

Objective: The aim of the study is to compare the level of CWB and the strength of the relationship between three types of job stressors and CWB in the group of Italian and Polish employees. Three types of job stressors were taken into consideration: interpersonal conflict at work (ICAW), organizational constraints (OC), and quantitative workload (QW). Furthermore, the moderating effects of job control (JC) and nationality (Italian vs. Polish) on the job stressors-CWB relationship were tested.

**Methods:** Data was collected among 1137 Italian (53.39% female) and 902 Polish employees (45.79% female). The participants were on average around 39 years old and their average tenure was approximately 15 years. Job stressors were measured with the Interpersonal Conflict at Work Scale (ICAWS), the Organizational Constraints Scale (OCS) and the Quantitative Workload Scale (QWI) (Spector & Jex, 1998). Job control was measured with the Factual Autonomy Scale (Spector & Fox 2003). CWB was measured with Counterproductive Work Behavior – Checklist (Spector et al., 2006). The research model was tested by means of regression analysis, using the PROCESS macros.

**Results:** The results revealed that Polish employees experience more stress at work, less JC and declare more CWB than their Italian counterparts. The results confirmed positive relationships between CWB and both the ICAWS and the OCS in the two national groups. These relationships were stronger among Polish employees. In contrast, the QWI was positively related to CWB in the Polish sample, but unrelated in the Italian sample. Furthermore, the results reveal three points. (1) The increase of ICW is associated with more frequent CWB but only among Polish (and not Italian) participants who reported low JC; (2) the increase of OC is associated with the increase of CWB, however, this effect is stronger among Polish workers with low JC; and, (3) JC moderates the effect of QW on CWB, but in a different way among Polish and Italian participants: in the group of Polish participants the relationship between QW and CWB is particularly high among employees with low JC, in contrast, in the group of Italian participants, the increase of QW results in the decrease of CWB among participants with low JC.

#### **P11: Healthy Change Processes - a Diary Study of Five Organizational Units**

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This paper explores a change process in the Central Norway Regional Health Authority, the implementation of new economic- and logistics systems, called HMN LØ. The purpose is to contribute to the understanding of how employees' attitudes towards change develop over time, and how attitudes differ between organizational units. In this paper we argue that a process oriented focus through the diary method, in addition to action research and feedback loops, will provide a greater understanding of the evaluation of organizational change and interventions. This is explored through the assumption that different units will have different perspectives and attitudes over time towards the same intervention or change process, due to different contextual and time related factors. The study was conducted with a longitudinal diary study, with measures once a month for eight consecutive months. This study contributes to the debates on the process approach in the field of organizational change and intervention, diary methods, and the use of action research.

#### **P12: Developing Leadership Skills among Young Adults: A Systematic Review**

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**Background:** The majority of literature on developing leadership skills concerns the experience of working adults. However, developing leadership among school-aged children and young adults attending third-level education is an emerging field. The objective of the systematic review is to aggregate the existing literature, and identify the key elements involved in developing leadership among young adults.

**Method:** The review covers published articles from 2003 to 2014 and is restricted to studies published in the English language. The following electronic databases were searched: Scopus, PubMed and Science Direct. In order to be included the articles had to be original, focus mainly on a leadership program, refer to either secondary education or university students, specify the duration and the objectives of the program, include a type of evaluation and be written in English.

**Results:** The combination of keyword yielded 413 potentially relevant articles in 3 different databases, 187 in Pub Med, 166 in Scopus and 60 in Science Direct. 54 articles were excluded due to duplication across the 3 different databases resulting in 359 articles. After reviewing the titles and abstracts of the articles, 307 of them were excluded. 52 full text articles were studied and 43 were excluded for not meeting the inclusion criteria. Finally, 9 studies meet the inclusion criteria.

**Discussion:** Relatively few studies were identified. There is a considerable literature based on leadership in the social sciences, but this knowledge has not been adapted for use with young adults.

### **P13: Intervention Specific Transformational Leadership and its Relationship to the Perceived Fit and Outcomes of a Participatory Intervention**

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The behaviours of managers is concluded to be an important factor in the process of making occupational health intervention successful (Nielsen, 2013). Transformational leadership, has in a vast number of studies been linked to employee health and well-being (Skakon, Nielsen, Borg, & Guzman, 2010). An important aspect of transformational leadership is its orientation towards change. Because of this, it has been suggested that transformational leadership also is likely to facilitate the process of occupational health interventions (Nielsen 2013).

What role, if any, transformational leadership plays during the implementation of occupational health intervention is, however, yet unclear. There is a lack of longitudinal studies that relates managers' transformational leadership during interventions to the expected outcomes (Nielsen, 2013). Perceived fit of an intervention (i.e., how appropriate participants find the intervention to be for solving problems) has also been suggested to be an important component for intervention success (Randall & Nielsen, 2011). In this study we investigate the impact of intervention specific transformational leadership on the perceived fit of the intervention (as an intermediate outcome), and how the perceived fit of the intervention affects the intended outcomes of the intervention (i.e. increased engagement and intrinsic motivation among participants).

Data were collected from a Swedish pulp factory that implemented a participatory intervention with the objective to increase both managers' and employees' engagement and intrinsic motivation. With the help of consultant led workshops and discussion, including both employees and managers, change initiatives were planned. Managers were also given an introduction to what role their leadership plays in relation to affecting engagement and motivation among subordinates. A panel sample of 90 participants were included in the study. Engagement and intrinsic motivation were measured pre-intervention (T1). A repeated measure of engagement and intrinsic motivation, together with measure of Intervention specific leadership and perceived fit of the intervention, were collected as a six month follow-up (T2). The data is analysed using structural equation modelling with M+.

Preliminary findings indicate that employee perceptions of their immediate managers' intervention specific transformational leadership was significantly related to perceived fit of the intervention, which in turn was significantly related to positive change in engagement and intrinsic motivation from T1 to T2. This study contributes the field of process evaluation by showing how intervention specific transformational leadership relates to the outcomes of an occupational health intervention by effecting the perceived fit of the intervention.

#### **P14: Using Assessments to Understand Workforce Capability**

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**Background:** Due to current challenging economic environment, organisations use assessments when selecting employees (Bateson, Wirtz, Burke & Vaughan, 2014). Although organisations require to understand their workforce capability in preparation for future needs, limited research is available on which approach to use. **Aim:** The aim is to explore whether assessments are practical for understanding workforce capabilities, specifically the service industry.

**Methodology:** A semi-private telecommunication company based in the Middle East sought to understand and develop the workforce capability of a customer facing department (N=148) at all levels (eg: managers, specialists and agents) against the organisation's behavioural competencies, and support them with any developmental outcomes. Assessments spanned over a period of 5 months, which consisted of (a) self and (b) observational assessments; (a) Mental Toughness (MTQ-48; Clough, Earle & Sewell, 2002), Aptitude (Logical and Verbal Reasoning (Cut-e, 2006)), Personality questionnaire (Shapes (Cut-e, 2006)) and Situational Judgment Questionnaire (bespoke for the organisation); (b) Role Play, a case study presentation and Competency Based Interview.

**Results:** Individuals were ranked against the scores obtained (ranging from Exemplary Performer to Strongly Needs Development). Results on Mental Toughness indicated that they scored lower in 'Control', specifically 'Emotional Control', but statistically, these results did not significantly impact any of the other factors. Individual results correlated with performance. **Discussion:** Gaps in behavioural competencies were identified, such as Exceeding Customer Expectations, Managing Change and Targeting Win-Win Outcomes. Training programmes were put in place for all the individuals to enhance their skills.

**Conclusion:** The organisation was able to understand the capability of its workforce through self and observational assessments, and were able to put forward a more structured development programme which tackled the needs of the group. This enabled individuals in being able to excel in their roles, be better equipped to handle their customers and future demands of the role.

#### **P15: Sustainable Employability of Hospital Nurses: Dialogue as Intervention**

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**Introduction:** Health care professionals are confronted with a fast changing work environment and continuously increasing work demands. Because of the increase in complexity, severity and extent of the demand for care on the one hand and a decrease of the workforce on the



other hand a sustainable career perspective and so-called life-long learning are crucial to face these challenges. An instrument assessing nurses' vitality, work ability, and individual development is expected to be helpful for starting a dialogue between the nurse and supervisor concerning these challenges. For this purpose a Vitality Scan was developed (2015). Organizing a structured dialogue between nurse and his/her supervisor is seen as a promising opportunity to get sustainable employability on the agenda. The overall aim of this project is to contribute to the health and wellbeing of nurses in order to facilitate their sustainable employability.

**Intervention:** Starting point of the intervention is the Vitality Scan, which monitors signals of possible stagnation on essential factors related to sustainable employability. This scan will be used as guideline for the dialogue between supervisor and nurse. The intervention further includes supervisor training on effective solution-focused dialogue and support in arranging follow-up strategies. Focus groups provide content for each of the intervention phases.

**Research questions**

1. What are realistic, attainable and useful characteristics of an intervention in which nurses and their supervisors conduct a constructive dialogue on sustainable employability, while using a Vitality Scan which explicates possible risk factors in relation to the sustainable employability of nurses, and during which customized follow-up actions are arranged if appropriate?
2. What is the effectiveness of the intervention on perceived social support at work and on behavioural determinants that influence sustainable employability?
3. What are the facilitators and barriers in the execution and implementation of the intervention programme, for the supervisors and for the nurses, according to the six domains of process evaluation?

**Study design:** All 32 nursing departments of a large regional hospital in the Netherlands are invited to participate in the programme which, based on the inclusion and exclusion criteria, leads to at least 14 supervisors and 140 nurses in both the intervention group and in the care as usual group. Primary and secondary outcomes are measured at baseline and during one-year follow-up. Qualitative and quantitative measures are used to evaluate the process.

At baseline, personal data such as age, gender, level of education, at both employees' and supervisors' level will be gathered. Potential confounders at supervisor level, i.e. management style and problem solving ability will be assessed. Additional information will be obtained from the available job satisfaction survey. A pilot study will take place before the start of the effect study. For nurses, the primary outcome is perceived supervisor support. Short-term secondary outcomes are about perceived co-worker support at work, skills discretion and key behavioural determinants: attitude, self-efficacy, perceived social influence, behavioural intention concerning sustainable employability. Long-term secondary outcomes are need for recovery, well-being, vitality and work performance.

#### **P16: Validity and Test-Retest Reliability of Production Loss Assessments**

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Production loss of employees while at work is often associated with health-related factors. However, even among healthy employees who experience work environment-related problems, research shows that poor psychosocial work environment factors are associated with high levels of production loss. This suggests that poor work environment is both a risk factor for ill-health and health-related production loss and could by itself be associated with production loss.

Nevertheless, measurement of production loss emphasise health-related production loss with little recognition for production loss due to poor work environment. This study therefore examines the convergent validity and test-retest reliability of health-related production loss (HRPL) and work environment-related production loss (WRPL) against a valid comparable instrument, the Health and Work Performance Questionnaire (HPQ).

A cross sectional study of 88 employed subjects, who were not on sick leave, were asked to self-rate their work performance and production losses. Using the Pearson Correlation and Bland and Altman's Test of Agreement, convergent validity which shows the level of agreement in the instruments was examined. Subgroup analyses were performed for employees recording problem-specific reduction in work performance. Consistency of pairs of HRPL and WRPL for samples responding to assessments 1 & 2 ( $n = 44$ ) were expressed using Intraclass Correlation Coefficient (ICC) and tests of repeatability. Approval to conduct the study was granted by the Ethical Committee in Stockholm. All subjects gave consent to participate in a web-based questionnaire used to gather information.

Test of agreement results between measurements estimate a mean difference of 0.34 (-0.28 to 0.97) for HRPL and -0.03 (-0.66 to 0.59) for WRPL compared to HPQ work performance. This indicates the production loss questions are valid and moderately associated with work performance for the total sample and subgroups. ICC for paired HRPL assessments was 0.90 ( $SD = 0.38$ ) and 0.91 ( $SD = 0.03$ ) for WRPL which implies that the test-retest reliability was good and suggests stability in the instrument.

HRPL and WRPL can be used to measure production loss due to health-related and work environment-related problems. These results may have implications for advancing methods of assessing production loss which represents an important cost to employers. The choice of production loss measure will significantly affect the credibility of estimated cost of production loss in regard to conditions at work. Emphasis on single health-related production loss measures may be misleading decision makers that use it to characterize the impact of actual work reduction that have occurred. Thus we propose that work environment related problems should also be measured and used in the calibration of reduced work performance of employees and ultimately, cost of production loss. We further suggest that including the reason for reduction in work performance may be useful when determining interventions to remedy the problem at work. The latter could be important as it highlights approaches to decision making and design of interventions in the workplace.

#### **P17: Emotional Intelligence in Nursing Students of a Public University of Guadalajara, México**

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Intrinsic and extrinsic factors have indicated that the nursing profession comes great responsibility and therefore pressures, conflicts and constant changes in their emotional state. Today is very important to know the emotional competencies from educational practice to enhance the resources of self-knowledge, empathy and efficient confrontation in the work of these professionals.

A descriptive, observational and analytic study was performed. It was attended by 90 students of nursing technical level and 142 undergraduate, averaging 20 years of age and similarity in the proportion of men (20%) and women (80%) in each group. Participants answer the following questionnaires: TMMS-24 Scale of emotional intelligence, Castilian version

(Extremera, N; Fernández Berrocal, P, 2004); Functional and Dysfunctional Impulsiveness Scale (FDI) (Dickman SJ, 1990) and ABP Test (Buss and Perry, 1992), the Spanish version of Agression Questionnaire (Rodríguez Peña and Graña, 2002) was administered.

It was found that 40% (92) of the undergraduate nursing students presented deficit in the ability to feel and express emotions (care) compared to 27% (63) of students of technical level. A range of 2% to 9% reported negative impulsivity. Regarding aggressiveness, higher levels were recorded in the verbal in both groups, but more anger in entry-level students. The psychometric self-report scales may be practical for early detection of changes in the emotional state nursing students, these can be used with the purpose of planning appropriate educational interventions, to balance and develop emotional intelligence.

### **P18: Validation of a German Version of the Social Components of Retirement Anxiety Scale (SCRAS)**

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With rising life expectancies and growing job identification, older employees are facing questions about how to (re)structure time, leisure activities and social networks in retirement life. Research on retirement transition and adjustment suggest, that the transition into retirement is a complex and longitudinal process involving multiple interacting factors. Not only job characteristics and personality factors, but also retirement expectations and worries may influence how well individuals manage the retirement transition. Besides health and financial concerns reported by many retirees-to-be, especially anxiety and worries about social changes are of relevance in the retirement transition process. Fletcher and Hansson (1991) developed the social components of retirement anxiety scale (SCRAS) comprising negative expectations about the social changes of retirement. They defined retirement anxiety as a “feeling of apprehension or worry regarding the uncertain, unpredictable and potentially disruptive consequences of impending retirement” (p.77).

The aim of this study is the validation of a German Version of the SCRAS, analyzing the factor structure as well as relevant factors that may influence retirement anxiety (e.g. retirement self-efficacy, bridge employment).

After translation and back-translation of the English version and a pre-test in a small German sample, the questionnaire was revised to adjust for semantic and cultural differences before it was administered to the validation sample of 106 German retirees-to-be, that were planning to retire within the next five years. Exploratory structural equation modelling was used to assess the factor structure. Furthermore, regression analyses were conducted to identify factors that influence retirement anxiety. After excluding items with unsatisfactory corrected item-total correlations or insufficient factor loadings, exploratory structural equation modelling supported a three-factor structure. Internal consistencies were acceptable for the three subscales as well as the full scale. In comparison to the original SCRAS version, with four factors the results of this study suggest a more parsimonious German version of the SCRAS comprising 12 items.

The German version of the SCRAS gives researchers as well as counselors the opportunity to assess retirement anxiety to identify vulnerabilities and preretirement preparation needs. The identification of influencing factors furthermore implies potential approaches to reduce retirement anxiety and therefore help older employees to successfully manage the transition into retirement.

## **P19: Effort-Reward Imbalance and Hazardous Alcohol Consumption among Humanitarian Aid Workers**

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Employee alcohol use has been shown to have potential detrimental effects for health and work outcomes. It has also been shown to be associated with exposure to work stressors. Humanitarian aid workers, in their purpose of relieving the suffering of others, face hostile and difficult work environments and can be exposed to multiple stressors (e.g. traumatic events, witnessing people in distress, environment unpredictability, high workload, life threatening events, difficult living conditions or lack of resources). It might be expected, therefore, that humanitarian aid workers would report high levels of stressor exposure and that this would be associated with hazardous alcohol consumption. Research to identify links between stressful aspects of work and hazardous alcohol consumption among humanitarian aid workers could usefully inform the design of sector-specific interventions concerned with the reduction of alcohol consumption.

The purpose of the present study was to explore the prevalence of hazardous alcohol consumption (AUDIT-C score) and its association with stress-related working conditions - defined in terms of effort-reward imbalance (ERI) - among a large sample of humanitarian aid workers operating across four continents. Questionnaire data were obtained from 1063 women and 917 men working in an international humanitarian agency.

Logistic regression analyses were conducted separately for males and females to investigate the relationship between effort-reward imbalance and risk of hazardous alcohol consumption while controlling for a host of socio-demographic and occupational variables. Using established cut-offs for the identification of hazardous alcohol consumption, the prevalence rate for hazardous alcohol consumption among females (18%) was considerably higher than the corresponding rate for males (10%). Prevalence of hazardous alcohol consumption varied significantly for geographical regions (range between 8% and 32%) and between expatriates (21% at risk) and locals (9% at risk). High ERI was significantly associated with hazardous alcohol consumption among females only. Female expatriates reporting intermediate ERI were at increased risk for hazardous alcohol consumption. It was concluded that effort-reward imbalance is associated with hazardous drinking among female humanitarian aid workers. Tailored interventions, such as the education of employees on the risks of hazardous drinking (with particular gender specific information on what constitutes hazardous alcohol consumption), and interventions to reduce effort-reward imbalance might help to reduce hazardous drinking among this population.

## **P20: A Naturalistic Multi-level Framework for Studying Transient and Chronic Effects of Psychosocial Work Stressors on Employee Health and Well-being**

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Recently, research in work and organizational health psychology (WOHP) has taken a shift towards more ecologically valid assessments of employee psychosocial stressors, strain, health, and well-being, which involve multiple assessments of the individual within a day. Known as Ecological Momentary Assessment (EMA), studies employing this methodology enable examinations of within-individual (daily) fluctuations in well-being as a result of work stressors and other environmental factors, as well as investigations of person-environment interactions. In addition, the study of employee health and well-being can benefit from the

application of new and exciting technologies for measurement, such as smartphones and wearable devices for the tracking of physiological well-being indicators. In this article, we provide an integrative review of EMA studies in the field of WOHP since 2010, and organize this literature using the Allostatic Load Model as an integrative framework. Further, we provide an overview of methodological tools that can be used in EMA research, and provide guidelines for analyzing EMA data. Finally, we conclude by discussing opportunities and challenges in the use of EMA in WOHP.

### **P21: Predictive Psychophysiological Stress Symptoms in Dentists at a Social Security Institution in Mexico**

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**Introduction:** Dentistry has been identified as one of the most stressful occupations in which a dentist's mental and/or physical health may be affected. The objective of this study was to identify chronic psychophysiological stress symptoms in relation to the presence of high stress levels perceived in dentists at a Social Security institution in Guadalajara, Mexico.

**Material and methods:** The design was cross-sectional and analytical by means of a 2011 census consisting of 87 dentists. The Stress Profile and the Stress Symptom Inventory were applied and the analysis was performed with multiple regression.

**Results:** The perceived stress levels were: 67.8% high, 29.9% medium and 2.3% low. The most frequent psychophysiological symptom of perceived high levels of stress was fatigue with 51%, and the female gender was the most affected.

**Discussion:** The existence of a meaningful association was shown between the chronic psychophysiological stress symptoms of insomnia, fatigue and the female gender, and perceived high levels of stress.

**Conclusions:** Early identification of the symptoms of chronic stress in dentists would favour the implementation of appropriate preventive programs to care for their health and workplace security.

### **P22: Difficult Customers as a Source of Stress among Service Workers: The Mediating Role of Negative Emotions**

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**Objectives:** The study concentrates on extra-organizational social stressors. Research suggests that social interaction with customers can be considered as a source of stress among service workers (Dormann & Zapf, 2004). Customer-related social stressors comprise hostile customer behaviors (i.e., negative attitudes and negative emotions revealed by customers in their dealings with employees) and disproportionate customer expectations (i.e., expectations that are difficult to meet, unclear or too high, beyond the standard service). The purpose of the study was to examine whether stressful relationships with customers (SRWC) affect the perceived stress of service workers through their effect on negative emotions and positive emotions. We make sure to control for dispositional affectivity to ensure that relationships between variables which are under study here are not driven by the affective disposition of the employee. Thus, the hypothesis was examined while controlling for positive affectivity (PA) and negative affectivity (NA) of the employee.

**Method:** The data was collected from 119 Polish workers (49.6% female) employed in the service industry. Participants were on average 31 years old and were employed as retail sales assistants. SRWC was measured with the Stress-Inducing Customer Behavior Scale (Szczygiel & Bazinska, 2013). Emotions experienced by employees at work were assessed with the Employee Emotions Scale developed by Bazinska and Szczygiel (2012). The EES consists of eight adjectives describing emotions which are most frequently experienced by customer service employees during their interactions with clients. The Employee Emotions consists of four negative emotions ('irritation', 'annoyance', 'antipathy', and 'anger') and four positive emotions ('contentment', 'enthusiasm', 'joy', and 'liking'). Perceived stress was measured the Polish version (Juczynski & Oginska-Bulik, 2009) of the Perceived Stress Scale (version PSS-10) developed by Cohen, Kamarck, & Mermelstein (1983). NA and PA were measured using the subscale of the Polish version (Brzozowski, 2010) of the Positive Affectivity Negative Affectivity Schedule (PANAS, Watson et al., 1988).

**Results:** To determine whether and how negative and positive emotions affect the relationship between SRWC and perceived stress a mediation analysis was performed. The analysis of mediation effects used a multiple mediation model with both negative and positive emotions entered simultaneously using the Preacher and Hayes' (2008) method for testing mediation. SRWC was the independent variable, perceived stress was the dependent variable, and negative and positive emotions were mediators. NA and PA were control variables. Results revealed that emotions experienced by employees partially mediate the relationship between SRWC and perceived stress. Moreover, results indicate that only negative emotions play a significant role as an intervening variable in the mediation model. A contrast analysis revealed that the specific indirect effect through negative emotions is larger in magnitude than the specific indirect effect through positive emotions.

**Discussion:** Results revealed that SRWC is positively related to perceived stress. Moreover, employees who declared experiencing more negative emotions during their interactions with customers reported more symptoms of stress. Finally, results indicate that negative (but not positive) emotions experienced by employees during contacts with customers can be regarded as one of the mechanisms through which stressful relationships with customers lead to stress.

### **P23: Work-related Resources and Stressors of Kindergarten Teachers**

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**Background:** The work of kindergarten teachers is of great importance for early childhood education as well as general economic interests. The working conditions of this target group are often characterized by multiple stressors (e.g., high workloads). The long-term goal of our study is to develop a questionnaire addressing the specific stressors and resources of this target group in order to provide systematic health promotion in childcare facilities. We investigated the work characteristics via qualitative and quantitative research methods.

**Study design:** At first, we carried out a qualitative survey of N=72 kindergarten teachers. The questionnaire contained open questions concerning their work-related stressors as well as resources. We analyzed the data using the qualitative data analysis software MAXQDA. We then developed a questionnaire including the most relevant stressors as well as resources and are currently conducting a nationwide quantitative validation study.



Results: Regarding work-related stressors, the qualitative results show that stressors of the work environment like noise, room conditions, or the furniture are mentioned most often (29%) followed by quantitative stressors (24%), social stressors (19%), and work-organizational stressors (16%). Regarding work-related resources, social resources are by far most often mentioned (67%), followed by appreciation of the work (10%), and possibilities for development (7%). Autonomy was least often mentioned (2%).cFurther analyses show differences in these results in terms of the age of the children and the position of the teachers. Those who work with children aged under 3 years more often reported social stressors and less often social resources. Also, they more often reported quantitative overload than those working with older children. Teachers in a leading position less often reported social stressors as well as stressors of the work environment. On the other hand they were more likely to report quantitative and qualitative overload. The preliminary results of the quantitative validation study mostly confirm the hypothesized scale structure of the instrument as well as the hypothesized relationships between resources and stressors with the health-related outcome variables. Furthermore, the analyses reveal which work characteristics are the most health-relevant for the target group.

Limitations: One should keep in mind that the data is based on kindergarten teachers working in Germany. It remains questionable, if the results can be adapted to other countries and varying conditions.

Implications: These results are valuable for a further professionalization of health promotion strategies for kindergarten teachers, which is a target group that has been neglected so far. The promotion of their health and well-being will not only be valuable for them, but also for the safety and well-being of the children.

## **P24: Techno-Stress, Strain, and Employee Commitment: An Investigation from Work Design and Social Support Theories**

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With the extensive use of Information Communication Technology (ICT) and Mobile Computing in organisations, more and more workers experience anxiety, higher work pressures, and job dissatisfaction related to the heavy exposure to ICT. Although stress at work is, by no means, a new phenomenon, our focus here is "technostress," (Clark & Kalin, 1996; Weil & Rosen, 1997; Brillhart, 2004), a modern disease caused by one's inability to cope or deal with ICTs in a healthy manner (Brod, 1984).

Scholars in the field of Management Information Systems have examined the impacts of technostress on employee work-related outcomes (Ragu-Nathan et al., 2008; Tarafdar et al., 2007, 2011), technology characteristics that induce stress in individuals (Ayyagari et al., 2011), and ICT-related stressors that may lead to stress reactions (Ragu-Nathan et al., 2008; Thome et al., 2005; Burke, 2008; Kupersmith, 2005). While scholars identify the causal relationship of the stressor-stress-strain chain of technostress and propose solutions to break the chain reactions, very few of them empirically investigate the coping strategies that can be used to break the chain reactions. Furthermore, studies that propose solutions to cope with technostress tended to focus on a single perspective (Ragu-Nathan et al., 2008; Tarafdar et al., 2010; Wang et al., 2008; Karasek, 1992; McDermott, 1984; Lawrence et al., 2007; Shu et al., 2011; Caro et al., 1985). Stress researchers have proposed useful stress management principles, such as altering the conditions of the work environment, enhancing coping resources through social support, and providing a more sophisticated matching of person and environment (Lazarus, 1995; O'Driscoll et al., 1996). We thereby argue that a comprehensive examination of stress coping solutions would be necessary for organizations to evaluate the



relative effectiveness of different interventions. To fill out the gap in the literature, it is therefore important to provide comprehensive coping strategies to reduce techno-stress based on multiple theoretical perspectives.

There are three main objectives in this study. First, we aim to identify the relative strength of ICT characteristics (stressors) that pose strain reactions on workers. We also investigate the impact of strain on two employee outcomes, namely organizational commitment and career commitment. Finally, drawing on the perspectives of work design and technical and non-technical support, we aim to identify effective technostress coping strategies. 278 knowledge workers in Taiwan participated in our survey research. Partial least squares (PLS) was used for data analysis. Results showed that two ICT characteristics, presenteeism ( $\beta = .16$ ,  $p < 0.01$ ) and information overload ( $\beta = .28$ ,  $p < 0.01$ ), significantly influenced stressors, which in turn led to strain ( $\beta = .62$ ,  $p < 0.001$ ). Strain then negatively influenced workers' organizational ( $\beta = -.11$ ,  $p < 0.05$ ) and career commitment ( $\beta = -.40$ ,  $p < 0.001$ ). To address the negative chain reaction, work design through enhancing decision making latitude was found to significantly reduce strain perception ( $\beta = -.12$ ,  $p < 0.05$ ). Also, facilitating workers' ICT literacy (rather than offering technical support), seemed to reduce strain ( $\beta = -.13$ ,  $p < 0.05$ ) more effectively. We also found that social support and technical support provision only reduce strain through the mediation of ICT self-efficacy.

## **P25: Subjective Stress Mediates the Relationship between Meditation, Mindfulness and Well-being: Cross-sectional and Longitudinal Relationships**

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The role of mindfulness in enhancing well-being has been gaining increasing attention in research communities. The term mindfulness broadly refers to a meta-cognitive state of awareness involving bringing one's attention to experiences occurring in the present moment in an accepting, open and nonreactive way (Kabat-Zinn, 2003). While the concept of mindfulness was originally derived from Buddhist philosophy, researchers in psychology and social science disciplines have operationalised the construct and begun researching correlates and practices that enhance mindfulness (Grossman, Niemann, Schmidt, & Walach, 2004; Keng, Smoski, & Robins, 2011). A disposition to be mindful is proposed to enhance well-being in the form of better coping, more vitality and less negative affect (Grossman et al., 2004). Various mindfulness activities, including meditation, have been used to enhance mindfulness and thereby well-being. The present research focused on a meditation approach involving systematic body scanning in which sensations that arise are observed objectively and non-reactively (Vipassana). In addition potential mechanisms explaining the relationship between frequency of this meditation practice, trait mindfulness, and well-being were examined; with a focus on possible mediating roles of subjective stress and self-kindness. Alternative models were tested of the potential mediating roles of both stress and self-kindness in predicting well-being from mindfulness and meditation practice.

A sample of adults ( $N=297$ ) enrolled to complete a Vipassana meditation program completed pre-program questionnaires. While all participants had enrolled in a Vipassana meditation program, the sample comprised both non-meditators and experienced meditators. Participants reported frequency and type of current and past meditation practice, trait mindfulness measured by the Freiburg Mindfulness Inventory, subjective stress measured using the Stress subscale of the Depression Anxiety Stress Scales, self-kindness derived from the Self-Compassion Scale and subjective well-being assessed using the WHO-5 Well-being scale. The model fit was adequate to good when examining changes from pre-course to two-week post-course ( $N=121$ ); fit was excellent when examining pre-course to six-month follow-up changes ( $N=88$ ).

Three alternative models of the relationships among variables were tested in the pre-program sample (N=297). In the best-fitting model, greater meditation practice had a direct path to trait mindfulness. Greater mindfulness had direct paths to reduced stress, greater self-kindness and greater well-being. Both stress and mindfulness, but not self-kindness had direct paths to well-being. Subsequently the best-fitting model was replicated using longitudinal data of change over time, examining samples who completed the Vipassana meditation course. In testing the model, standardised residual change scores served as indicators of the constructs. The model fit was adequate to good when examining changes from pre-course to two-week post-course (N=121); fit was excellent when examining pre-course to six-month follow-up changes (N=88).

Findings support a model in which Vipassana meditation enhances mindfulness, and increases in mindfulness are associated with reduced stress levels. Improvements in both mindfulness and stress were direct predictors of well-being comprising energy, vigor, and interest in life. While self-kindness increased in parallel with increases in mindfulness, it did not make a unique contribution to well-being when mindfulness was included in model.

## **P26: Sleep Disturbance as Mediating Factor between the Effects of Work-Life Interplay on Musculoskeletal Pain and Headache Complaints**

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**Study Objectives:** This prospective cohort study examined previously underexplored relations between work-life interplay (WLI), sleep and musculoskeletal pain and headache in order to provide practical information about specific, modifiable factors at work.

**Design:** This 2-wave longitudinal prospective study was part of-, and used data from the research project 'The new workplace: Work, health, and participation in the new work life', which is being carried out by the National Institute of Occupational Health in Norway. The repeated-measures online survey includes data on background information, work organization, psychological and social work factors at work, coping strategies, attitudes towards work, personality, mental health and physical health complaints.

**Participants:** A sample of Norwegian employees from a broad spectrum of occupations completed a questionnaire at two points in time, approximately two years apart. Cross-sectional analyses at T1 comprised 7459 participants, cross-sectional analyses at T2 included 6688 participants. Prospective analyses comprised a sample 5069 of participants who responded at both T1 and T2.

**Measurements and Results:** Six exposure variables reflecting WLI were selected from the extensive General Nordic Questionnaire for Psychological and Social Factors at Work (QPS-Nordic). Two aspects of troubled sleep, namely difficulties initiating sleep and difficulties maintaining sleep, were studied as mediating factors. Outcome variables musculoskeletal pain and headache were measured by self-reported back- and neckpain, and headache.

The study is currently being conducted, and the results of the current study will be presented and discussed at the conference.

## **P27: Organizational Culture and Work-Life Integration: A Barrier to Employees' Respite?**

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Several societal factors, including technological progress, have led to increasing permeability of boundaries between work and personal life. Given this blurring of boundaries between the two spheres, the strategies used by employees to manage work-life have been the subject of extensive investigation. However, the management of work-life boundaries is portrayed in the literature as being a matter of individual choice, while organizational influence has been underestimated. Building on social identity theory, the first objective of this article is to examine whether or not individuals working in an environment that favors a culture of integration are more inclined to imitate the boundary management behaviors of their colleagues, despite their own personal preference for segmentation. The second objective is to determine whether and how a mismatch between culture and personal preferences can influence psychological detachment as well as emotional exhaustion from work.

A study of 243 employees showed that the perception of an organizational culture of integration lowered the effect of preference for segmentation on the capacity of employees to detach themselves from work during rest periods. Specifically, the level of psychological detachment was higher among employees who preferred to use segmentation strategies, except in cases where their perception of an organizational culture of integration was high. Further, a path analysis highlighted a moderated mediation: preferences for segmentation were associated with a reduction of emotional exhaustion in employees by promoting a high level of psychological detachment, and this reduction was even stronger among those who perceived a weak culture of integration in their organization.

To our best knowledge, it is the first study which determined whether and how, from the point of view of both individual preferences and organizational culture, management of boundaries is linked to recovery after work. By questioning the consequences of integrative policies and norms that are increasingly present within organizations, our study is the first to show that the social environment plays a significant role in the negotiation of work-life boundaries and the emotional state of workers. The results of this study can thus help researchers better understand the importance of accurately distinguishing between, on the one hand, the personal preferences of individuals with regard to management of their boundaries, and on the other, the behaviors actually adopted to manage these boundaries, since the latter are largely influenced by the organizational context within which the employees operate. This result sheds new light on practice in the field, since it will allow practitioners to realize the importance of instituting practices which concurs with the theory of person-organization fit (Kristof-Brown et al., 2005) and which promote a fit between individual preferences and the culture of an organization. This study also encourages both job candidates as well as employers to be cautious in the hiring process and to pay more attention to personal preferences and the organizational work-life culture.

## **P28: Work-family Enrichment and Well-Being: Does Age Matter?**

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Despite the importance of work-family balance across the lifespan, little empirical research has been devoted to older workers' experience of the interface between work and family life (Allen & Shockley, 2012; Huffman et al., 2013). Especially, little is known about the effects of work-family enrichment. This study aims to investigate the role of work-family resources, such as Work-Family Enrichment (WFE) and Family-Work Enrichment (FWE), on Future Time

Perspective (FTP) and well-being. Compared to work-family conflict that tends to decrease with age, work-family enrichment appears to remain steady across aging (Allen & Shockley, 2012). These findings might be explained in the light of Socio-Emotional Selectivity theory (SST, Carstensen et al., 1999), which suggests that older workers make better choices in emotion regulation strategies (Scheibe & Zacher, 2013). In fact, because of the reduction in their Future Time Perspective (FTP, Carstensen et al., 1999), older workers emphasize more and more close social relationships (e.g., with family members) as they grow older.

Some studies found that FTP may be influenced by job resources, such as job control and job complexity, especially among older workers (e.g., Zacher & Frese, 2009). Moreover, other studies lead to expect relationships between work-family interface and FTP. In particular, Treadway et al. (2011) found that individuals with a limited-FTP (e.g., older workers) were more affected by work-family conflict while those with an open-ended FTP (e.g., young workers) were more affected by family-work conflict. On this basis, we hypothesize that positive effects of WFE on FTP will be stronger positive for older workers, while positive effects of FWE on FTP will be stronger positive for younger workers. Finally, consequences upon well-being (emotional exhaustion, engagement) will be investigated.

Data were collected online in a public sector company in Belgium ( $n = 258$ ). The mean age was 47 years ( $SD = 9.3$ , range = 18-64 years). Congruently to the hypotheses, results show that FWE was positively related to FTP only among younger workers. Furthermore, the positive indirect effect of FWE on engagement and the negative indirect effect of FWE on emotional exhaustion through FTP were significant only in younger workers. Regarding WFE, effects tended to be stronger positive among older workers ( $p = .059$ ). Congruently, the positive indirect effect of WFE on engagement and the negative indirect effect of WFE on emotional exhaustion through FTP were significant only among older workers.

Extending previous studies comparing older and young workers' experience of work and family life (e.g., Hill et al., 2014; Treadway et al., 2011), this study highlights the importance of valuing different work-family resources for younger and older workers, especially to expand their Future Time Perspective and to increase their well-being at work.

## **P29: Personality Traits as Moderators between Job Satisfaction and Work-Family Interaction**

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Job satisfaction may be influenced by many factors, including salary, good relationships with co-workers, proper working conditions, career opportunities, etc. (Spector, 1994). Research results also demonstrate the impact of work-family interaction on employee job satisfaction. Nevertheless, even having similar work conditions (e.g. the same salary for similar job and good relationships with co-workers) there might be differences in experienced job satisfaction due to differences in employee personality (Bruk-Lee et al., 2009).

The aim of the study is to find the relationship between personality traits, job satisfaction and work family interaction in employees as well as to assess the significance of personality traits in the relationship between work family interaction and job satisfaction. Data were collected from 180 respondents, aged 22 to 67, working as schoolteachers, medical professionals and librarians from Šiauliai and Telšiai districts in Lithuania. NEO Five-Factor Inventory was used to identify personality traits, Survey Work-Home Interaction-Nijmegen (SWING) inventory was used for identify work and family interaction and Minnesota Satisfaction Questionnaire (MSQ) was used to identify job satisfaction.

The results of the study showed that higher scores on conscientiousness, extraversion and agreeableness were related to higher job satisfaction, whereas higher scores on neuroticism were related to lower job satisfaction. Higher scores on conscientiousness and agreeableness were related to more rare work-family conflict, and higher scores on neuroticism was related to more frequent work-family conflict. There was no statistical significant relationship between extraversion and work-family conflict. The results showed that increased conscientiousness, extraversion and agreeableness were statistically significantly related to more frequent work-family enrichment; and no relationship was observed between neuroticism and work-family enrichment. Conscientiousness and neuroticism were found to be moderators between work-family enrichment and job satisfaction. None of personality traits were moderators between work-family conflict and job satisfaction.

### **P30: Burnout and Higher Education: Cases based in Taiwan and Mainland China**

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Burnout and death from overwork have recently been an important issue to faculties of universities in both Taiwan and Mainland China during recent years. However, there is neither ample discussion on such issue based in Taiwan and Mainland China nor are sufficient solutions provided to address it. In this study, we illustrate recent phenomenon of faculties' burnout and death from work at universities in Taiwan and Mainland China. We then introduce double-recovery process along with explaining the notion how such process benefits the reduction of burnout. Finally, we through job re-design perspective provide three pragmatic solutions that benefits faculties' implementation of double-recovery process as a strategical thinking for decision makers of universities in both Taiwan and Mainland China to resolve their faculties' burnout and death from overwork situation.

### **P31: The Warning System for the Maladaptive Behaviours in the Law Enforcement (WSMB)**

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The warning system for the maladaptive behaviours (WSMB) is a data-based management tool designed to identify officers whose maladaptive behaviours problems, and then to provide interventions, usually counselling or training, to correct those problems. WSMB can be a key component in a risk management system. A WSMB consists of four basic components: performance indicators, identification and selection process, intervention, and post-intervention monitoring. The performance indicators involve those aspects of officer performance that are the subject of official departmental reports and are entered into the WSMB database.

Planning Process: 1)Recognize the Need, 2) Involve the Command Staff Early 3) Create a Planning Process 4) Pinpoint Responsibility 5) Involve Officers From All Ranks 6) Utilize Outside Experts 7) Assess the Department's Computer Infrastructure 8) Keep the Staff Informed 9) Keep External Stakeholders Informed 10) Identify and Address Specific Issues 11) Take the Time to Get It Right 12) Provide Staff Training 13) Choose Software 14) Finalize the Plan 15) Implement the EI System. The areas for the indicators for The warning system for the maladaptive behaviours: a) financial; b) human resources; c) protection; d) medical; e) psychological; f) discipline.

The indicators for 'the warning system for the maladaptive behaviours': The warnings for the unpaid bank debt; The salary decrease; The poor service marks; The regression in the function; The referrals for the anti-social behaviour; The incurable diseases; The chronic

diseases; The work accidents; The prohibiting for the carrying of arms, as the result of the various diseases; Too many medical leave; The psychological evaluation results; The life events; The critical incidents in the professional activity; The punishments in the professional activity. The managers have found 'the warning system for the maladaptive behaviours' to be an extremely useful tool for achieving accountability, with many benefits for the law enforcement agencies.

### **P32: Psychosocial, Health Promotion and Safety Culture Management: Are Health and Safety Practitioners Involved?**

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**Background/ Aim:** Health and Safety Practitioners (HSPs), as frontline professionals advocating for the Occupational Health and Safety (OHS) conditions at work, have a pivotal role in an organisation. Over the last number of years, the nature of work has changed; the assessment and management of psychosocial work factors and health promotion are now an additional core challenge in OHS. This study aims to investigate the HSPs' main tasks and their involvement in activities regarding the management of psychosocial work risks, safety culture and health promotion (HP) within their organisations. We will provide an overview of the current tasks performed by HSPs in UK and Ireland with a focus on psychosocial risk management, safety culture and health promotion tasks (Objective 1). Job and organisational characteristics will be compared for the HSPs who are involved in these types of tasks and those who are not (Objective 2). Additionally, organisational predictors of engagement in psychosocial, health promotion and safety culture activities will be determined (Objective 3).

**Methods:** Data were collected through a web-survey from 1444 HSPs, members of the Institution of Occupational Safety and Health (IOSH) in Ireland and UK. The questionnaire was adapted from Hale et al. (2005) and Jones (2005) concerning the OHS structure in the HSP's organisation, his/her main areas of activity and a list of the most common tasks performed by European HSPs. Chi-square analysis was used to assess the association between HSPs organisational/work characteristics and their involvement in psychosocial work-related issues, safety culture and health promotion. Logistical regression was used to ascertain organisational predictors of the HSPs' involvement in these tasks.

**Results:** Not even one third (30.8%) of HSPs engaged in psychosocial risk management. Tasks related to health promotion or creating/maintaining a good safety culture were more common (86.8%, 64.2%, respectively). There was no variation in the proportion of HSPs performing tasks related to psychosocial risk management by company size ( $\chi^2=0.819$ ;  $p>0.05$ ), job title ( $\chi^2=1.167$ ;  $p>0.05$ ) nor industrial sector ( $\chi^2=12.69$ ;  $p>0.05$ ). Those in the "Agriculture, forestry/fishing, mining/quarrying" sector were most involved in these activities (HP 84.4%; safety culture 90.6%). HSPs with "Manager, Director, Head, Lead, Coordinator" roles were more likely to perform health promotion and safety culture-related activities independent of industrial sector or company size.

**Conclusion:** HSPs do not seem to be included in psychosocial risk assessment and management in most workplace settings independent of company size, sector or job title. Nevertheless, the HSPs involvement in actions regarding psychosocial factors seems to be determined by factors not addressed in this study. The results highlight the challenge in ensuring a holistic and multidisciplinary approach for prevention of psychosocial hazards for integrated OHS management. These findings are in line with previous research which reported that the implementation of the EU Directive on psychosocial risks and work-related stress is still widely unsatisfactory.



### **P33: Work Ability as Risk Marker of Worker Health and Organisational Effectiveness: Longitudinal Comparison of the Single-Item Work Ability Score Versus Multi-Item Work Ability Index**

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**Background and aims:** Work ability is an index of self-perceived capability to fulfill the mental and physical demands of the job. In recent times a single-item work ability score (WAS) has emerged as a quick-to-administer and interpret alternative to established multi-item versions of the work ability index (WAI). Research is needed to examine the effectiveness of the WAS relative to the WAI in terms of the prediction of worker health and organisational effectiveness outcomes. This study prospectively compares the WAS and the 15-item version of the WAI in terms of the prediction of individual health (job satisfaction, psychological distress, job stress) and organisational effectiveness (sickness absence, work engagement).

**Methods:** This prospective cohort study involved 74 manual workers in the UK that completed the WAI and WAS at baseline and reported the outcome variables at nineteen-month follow-up. A two-step hierarchical regression was performed for each of the target variables. Socio-demographic variables (age, gender) were entered in the first step so as to control for their possible effects on the criterion variables. In the second step, either the WAI or the WAS was entered.

**Results:** For each outcome variable the WAI explained a greater portion of variance than the WAS, after controlling for the possible influence of age and gender at baseline: Psychological distress (WAI,  $\Delta R^2 = .15$ ; WAS,  $\Delta R^2 = .02$ ), job stress (WAI,  $\Delta R^2 = .04$ ; WAS,  $\Delta R^2 = .01$ ), absence (WAI,  $\Delta R^2 = .03$ ; WAS,  $\Delta R^2 = .00$ ), work engagement (WAI,  $\Delta R^2 = .09$ ; WAS,  $\Delta R^2 = .02$ ), job satisfaction (WAI,  $\Delta R^2 = .08$ ; WAS,  $\Delta R^2 = .01$ ).

**Conclusions:** The WAI performed better than the WAS in terms of the prediction of each index of individual health and organisational effectiveness. This study adds to the evidence for the utility of the multi-item Work Ability Index (WAI). For the purpose of identifying workers at risk of psychological ill-health and organisational ineffectiveness the multi-item WAI might be better suited than the single-item WAS.

### **P34: In the Middle: Managers' Experiences of the Negotiation between Workers and Workplaces in Cases of Cancer**

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Little evidence has been gathered pertaining to managers' experiences negotiating chronic illness in the workplace. The purpose of the present qualitative interview study was to gain insight into how management negotiates the return to work experience of employees with cancer. Thus far and pending further data collection, 4 front line managers, 1 disability manager, and 1 human resources advisor aged 40 to 60 (M age = 47.33 years, SD = 8.80 years) who had managed the return to work of at least one employee with cancer within the past five years were interviewed. A wide range of industries were represented, including healthcare, tourism, automotive, legal, and retail. All employers but one were located in an urban setting. Participants had a combined average of 7.54 (SD = 8.94) years of experience in their current job, with an average of 5.15 (SD = 4.44) with their current employer. All participants were female, and their employees were a mix of females (n = 4) with breast (n = 2), ovarian, and lung cancer, and males (n = 2) with prostate cancer.



Semi-structured interviews were conducted, during which we asked participants about the return to work process with their most recent employee diagnosed with cancer. We asked about the workplace response, including what accommodations were provided to the employee, impact on the workplace (including coworkers) of managing the illness, and any policies in place that facilitated the process.

We used open coding, examining the transcripts for units of meaning, followed by axial coding in which we identified several categories that reflected the needs and abilities of the employees (e.g., accommodation, right to privacy, hard-working), the needs and resources of the organization (e.g., productivity and co-worker morale, more benefits, more flexibility) and the manager's response. Finally, we coded selectively, seeking the relationships amongst these categories. This revealed a tension between the needs of the organization and the needs of the employee, with the manager "in the middle," managing the needs of both parties. Tension was reduced in contexts in which more organizational resources were available to meet the needs of the employee and the employee was able to meet more of the needs of the organization, giving management more control. Tension increased in situations in which management had less control, with fewer organizational resources or when the employee met fewer of the needs of the organization (such as sharing helpful details about the illness). Novel insights were discovered about how this illness impacts employers, and the role that managers play in meeting the individual needs of ill employees while ensuring that the work of the organization is done effectively, could increase organizational competencies in dealing with serious illnesses in the workplace.

### **P35: Employers' Perception Related to OHS Management: Differences by Firm Size in an Italian Survey**

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Background: Small and medium-sized enterprises (SMEs), defined as enterprises which employs less than 250 people are a major component of the European economy, representing 99.8% of all businesses and almost one third (66.8%) of the entire workforce. In Italy, 99.9% of firms are SMEs, most of which (94.6%) fall within the "micro" size category, employing 80.4% of the workforce and accounting for 67% of the national added value, among the highest proportions in European Union. Despite their economic importance and the high number of workers employed, SMEs and micro enterprises have received very little attention from Occupational Safety and Health (OSH) research in most countries. However, in the last decades, a growing interest was shown by policy makers and scientists in identifying critical OHS issues in this kind of firms. The Italian Workers' Compensation Authority (INAIL) carried out a national survey in the framework of INSuLa Project to investigate the employer's perception and awareness about OSH implementation in the context of the related Italian legislative framework (Legislative Decree 81/08). In particular, the aim of this study is to point out if there is any difference in employer's perceptions on OHS management with respect to different firm sizes.

Methods: The study has been conducted on a sample of 1010 employers, stratified by economic activity sector, firm size and geographical area. According to the number of employees, the firms were classified into micro (1-9), small (10-49), medium (50-249) and large (250 and over). All measures were self-reported through a computer-assisted-telephone-interview (CATI). The questionnaire included dichotomic questions, Likert scale and

nominal/ordinal items. Descriptive statistics, ANOVA, CHI-Square test, generalized linear models and multinomial logistic regressions were performed in order to analyse the differences between groups. In accordance with the aim of the study, comparisons between firm size classes were studied taking the large enterprises as baseline. Statistical analysis was carried out using IBM SPSS for Windows, version 21.0. Significance level was set to 0.05.

Results: Employers of microenterprises resulted less persuaded of the usefulness of occupational risk assessment and management activities. Specific preventive and protective measures were less commonly adopted in micro (54.1%) and small firms (56.3%) compared to medium (75.5%) and large ones (78%) (Chi-square test=45.3;  $p<0.001$ ). Whenever put in place (n. 638), these measures were reported as less effective by microenterprises. Employers of microenterprises perceived OSH management as a legal obligation rather than an added value if compared with large ones; furthermore, they perceived it as a moral duty towards workers (adjusted chi square test=31.99;  $p<0.01$ ). Over 70% of the general sample considered sustainable to invest in OSH, even if the perception of sustainability grew with increasing firm size.

Discussion: This study highlighted some critical issues related to OSH management in small and micro enterprises and identified specific factors that can impact on safety and health conditions in this kind of firms. These findings may drive policy implementation at national level in order to improve OSH in SMEs, taking into account their structural, economic and productive characteristics.

### **P36: OSH Leveling during Economic Slowdown - The Social Amplification / Attenuation of Risk**

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While economic slowdown crash-tests stock-markets, significant pressure is posed to labour market that could also affect working conditions. OSH (Occupational Safety and Health) is not given the required importance, especially in SMEs (Small Medium Enterprises). Areas such as training, new work equipment purchasing and technologies are mainly the most affected. However, it is found that there is an apparent procyclical correlation between a country's GDP (Gross Domestic Product) and occupational accidents' rate with a respective phase shift (time lag) representing the required time needed for adaptation. Moreover, even though accidents' rate is reduced, new forms of occupational risks emerge.

According to a recently proposed model, OSH is lying on a mesh supported by eight pillars / determinants which are interacting, adapting and defining OSH's level. The bonds that are formed between the determinants, define flexibility and strength against pressure posed by external factors like recession. That model constitutes a safety net acting as an opposing force to any pressure posed on OSH. The key for the net's stability is NLI's (National Labour Inspectorate's) position and relation with each one of the determinants. Such an interaction can be either direct or indirect. However the determinants also interact with each other in order to achieve the steady state. This study proposes a new model in order to describe and analyse this interaction based on the social amplification / attenuation of risk and its perception, describing the mechanism of risk communication between the above-mentioned determinants.

### **P37: The Impact of Perceived Management and Coworker Safety Priorities on Safety Outcomes**

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**Introduction:** Research has shown that safety climate predicts safety behavior and safety outcomes in a variety of settings. One important component of safety climate is employees' perceived priorities of safety relative to other operational demands (e.g., productivity, quality or efficiency), thus potentially creating competing demands for employees. According to Zohar (2003), the operationalization of safety climate should involve employees' evaluations of the relative priority of safety, as compared to other competing priorities. Zohar (2010, p. 1518) mentioned that "obviously, how organizational leaders' trade-off production-related policies and procedures when situations arise, where some policies are in direct conflict with safety will provide the clearest message to employees regarding which is most important."

The purpose of the current study is to examine the impact of three types of perceived management/coworker safety priorities on employee safety behavior and injury outcomes. Prior research has stated that safety climate is a multilevel construct usually comprising two levels: organization-level safety climate (employees' perceptions of the company's/top management commitment to and prioritization of safety) and group-level safety climate (employees' perceptions of their direct supervisors' commitment to and prioritization of safety). In line with this, this study adopted a multi-level view on safety priority and included team/coworker level safety priority. Three components (i.e., perceived top management safety priority, direct supervisors' safety priority, and work group/team safety priority) were proposed to correlate with employees' safety behaviors, which would subsequently affect injury outcomes. The specific hypotheses examined in the study are:

Hypotheses 1: Employee perceived safety priority of top management (1a), direct supervisor (1b), and team/coworker (1c) will be related to employees' safety behavior and injury outcomes (days away from work).

Hypothesis 2: Safety behavior will mediate the relationship between different levels of perceived safety priority and injury outcomes.

**Method:** Three levels of perceived safety priorities, employee self-reported safety behavior and injury outcomes were measured using survey items developed/published in earlier studies (i.e., Huang, Zohar, Robertson, Garabet, Lee, & Murphy, 2013 a, b; Nordic occupational safety climate questionnaire, Kines et al., 2011). Tenure and weekly work hours are controls in the study. Four-point Likert scale was used for all the scales. Survey data were collected from 858 field workers (with a response rate of 89%) in 16 locations across the US at a TV-cable installation company.

**Results:** Results showed that all three types of perceived safety priorities have significant (and unique) positive relationships with employee safety behavior. Furthermore, safety behavior is a significant mediator of the relationship between the three types of perceived safety priorities and missed work days due to workplace injury.

**Conclusion:** The results of this study indicate that employees' perceptions of organization-level (regarding top management), group-level (regarding direct supervisor), and team-level (regarding workers' team/co-worker) safety priorities indirectly affect injury severity through self-reported safety behaviors. The results offer important recommendations to organizations that they should address employee perceived safety priorities from different levels of management as well as their workgroup when trying to improve workplace safety and reduce costly injuries.

### **P38: Ignoring it makes it worse: Passive Leadership, Work-Family and Workplace Health and Safety**

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A growing body of literature offers theoretical and empirical support for the proposition that laissez-faire or passive leadership is a destructive form of leadership. Passive leadership may be a root cause of employee stress including heightened work and family conflict (Kelloway et al., 2005). In turn, consistent with conservation of resources theory, heightened employee stress has been associated with a diverse array of health and safety outcomes (e.g., Turner et al., 2014). In this research we propose and evaluate a moderated mediation model in which passive leadership is posited as a predictor of work and family conflict (both work interfering with family and family interfering with work) and, in turn, work-family conflict is posited as a predictor of three health and safety related employee outcomes (i.e., employee strain, experienced safety incidents and enacted workplace aggression). Passive leadership is also posited as a moderator of the relationship between work and family conflict and outcomes.

Data from 575 Canadian employees partially supported these hypotheses. Passive leadership predicted work interfering with family ( $b = .30, p < .01$ ) but not family interfering with work ( $b = .04, p < .01$ ). All three outcomes were predicted by both work interfering with family (Aggression:  $b = .04, p < .01$ ; Strain:  $b = .22, p < .01$ ; Incidents:  $b = .11, p < .05$ ) and family interfering with work (Aggression:  $b = .06, p < .01$ ; Strain:  $b = .19, p < .01$ ; Incidents:  $b = .13, p < .05$ ). For all outcomes moderated mediation was supported for work interfering with family but not for family interfering with work (Indices of Moderated Mediation Aggression = .01,  $p < .05$ ; Strain = .02,  $p < .01$ ; Incidents = .03,  $p < .01$ ). In each case analysis of simple slopes showed that the relationship between work interfering with family and the outcome was stronger when passive leadership was high and was weaker and nonsignificant when passive leadership was low. Implications for future research and organizational practice are discussed.

### **P39: An Exploration of Failure/Accident Attributions and the Potential Implications for Research in Occupational Health Psychology with Psychiatric Nurses**

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The current review of the literature provides an overview of Attribution Theory (AT) and the themes, trends and gaps that have emerged for this construct within the field of occupational health psychology. AT is a widely published area of research and has served as a theoretical framework to investigate how individuals interpret accidents and their causes. Within this framework, researchers have investigated cognitive biases such as the self-serving bias, the false consensus effect, the actorobserver bias, the fundamental attribution error, the ultimate attribution error, Fischhoff's hindsight bias, the hedonic relevance bias, the optimism bias, and defensive attribution theory.

Themes of this review include subjective attribution tendencies, the types of attributions and their relation to safety behaviours, controversies regarding the assumptions of responsibility and the importance of accurate accident appraisals. Current gaps in the literature include somewhat dated research and the lack of the full use of Weiner's AT model (1985 & 2010). In addition, there seems to be a paucity of research on AT as it applies to occupations with a high prevalence of accidents including psychiatric nursing. The review further describes the extent to which the theory may be useful for accident prevention and in psychiatric nursing where practitioners face not only the common risks inherent to the profession but the significant and unique risks in mental health facilities such as patient aggression and violence. This paper concludes by suggesting avenues of possible research as it applies to this profession, methodological challenges and the implications for future studies.

#### **P40: Work-Related Traumatic Brain Injury in the Canadian Workforce: A Cross-Sectional Study of Injured Workers in Ontario**

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**Objectives:** To examine the demographic and injury characteristics of employees with mild traumatic brain injury. Through a descriptive analysis of self-reported data, we aimed to understand whether employees perceived their injuries to be preventable, and whether they considered their job and health and safety training adequate for their occupation.

**Methods:** Using a cross-sectional design, participants (n = 47) were recruited from an outpatient clinic at a large, urban teaching hospital in Ontario, Canada, to which they were referred for persisting symptoms related to brain injury. Participants completed a questionnaire about the nature and causes of work-related brain injury, and the perceived adequacy of occupational health and safety training and workplace injury prevention.

**Results:** In our sample, 46.7% of study participants were female. On average, participants were 13.1 months post-injury (SD = 14.4) at the time of recruitment and had 12.8 years of work experience (SD = 11.0), and 31.8% had a previous head injury. The majority of participants believed their injury was preventable (91.7%) and were advised to rest post-injury (77.8%). Furthermore, nearly half of all respondents (48.8%) were over 50 years of age, with an age range of 20-64 years; most were 55-59 years of age at the time of injury. Just over half of the participants were unionized (54.3%), with more having received job training (84.4%) and health and safety training (68.9%) at the time of their workplace injury. In terms of the manner in which an injury occurred, 39.1% of participants reported being struck by/against an object, 34.8% a fall/slip, and 15.2% workplace assault.

**Conclusions:** Our findings suggest that most injured workers perceived their workplace injuries to be preventable. Workers were most vulnerable to injury at the point of completing an assigned job duty. Efforts to provide sufficient training to workers and creating a workplace culture of health and safety may mitigate work-related brain injuries and prevent subsequent re-injury.

#### **P41: Safety Culture and Effective Team Structures to Enhance Patient Safety in Mental Health Care Settings**

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**Objective:** The purpose of this study is to investigate the need for a safety culture in health care organizations, in particular to enhance patient safety through safety performance and effective teamwork in mental health care. In order to improve patient safety and reduce error rates in mental health care settings the organization needs to develop a safety culture at all levels, which leads to effective communication, cooperation and back up behavior within the teams even in critical situations. Although there is much information about adverse events and teamwork in the operating room, there is a lack of awareness about adverse events and safety issues in non-surgical units, especially in neurological and psychiatric settings.

**Data and Methods:** The survey was conducted in two selected neurological and psychiatric units in an Austrian hospital. To assess the safety culture and components of effective teamwork within the units, we combined the German version of the Hospital Survey on Patient Safety Culture and the German version of the Safety Attitudes Questionnaire and developed the FSKT which includes the most important questions of both surveys. 153 staff members received the questionnaire, of which 54 were completed (response rate of 35%). The data obtained in the survey were transferred to SPSS. At first we used descriptive statistics for assessing safety culture (comparison of mean scores of the dimensions) between and within units. Next, Spearman correlation was applied to determine a link between safety culture, teamwork and patient safety to answer the hypotheses.

**Results:** Findings suggest a mainly positive safety culture throughout the sample and a positive correlation between effective team structures and patient safety. It should be noted that solely effective teamwork (communication openness, non-punitive response to error, feedback and communication to error) is associated with patient safety whereas just working in teams or unspecific communication cannot be linked with patient safety.

**Discussion:** Limitations considered in the study are first the small, not randomized sample and secondly, due to the lacking validation, the used questionnaire should not be compared with other studies yet. In addition to quantitative surveys we also require the need for more qualitative research (observation, interviews, including the human factor) to enhance the transparency for evidence based decision making. Nevertheless the study contributes to a deeper understanding of teamwork and safety performance to improve patient safety and raises awareness of further research in the uniqueness of the neurological and psychiatric setting.

#### **P42: Contribution to the Prevention of Occupational Stress**

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**Objectives:** The objectives of this study were to assess the importance of the mental suffering of employees in the service sector of a city in western Algeria and to identify risk factors and moderators of this suffering, in order to develop effective prevention.

**Methods:** Standardized questionnaires were subjected to 753 employees in the tertiary sector. These questionnaires include three categories: A social and professional record (21 items), Maslach Burn Out Inventory: MBI (22 items), Job Personal Interaction Scale: JPIS (35 questions on the perception of the work environment by the individual, divided into 6 rubrics including workload and unpredictability, control, rewards, recognition and fairness at work, social support, conflicts and perceived value at work, and training). The data collected were anonymous and confidential. Data analysis was performed using SPSS (version 17.0). Univariate analysis (chi-square) and a multivariate analysis (logistic regression) were performed to analyse the data.

**Results and conclusion:** The response rate was 78.75%. The average age was  $38.42 \pm 8.26$ , and the sex ratio 1.1 with a female predominance. The state of burn-out was 23.6% after logistic regression. Among the social determinants of psychological distress, only taking medication to relieve pain was remained significant ( $p=0.0002$ ). Regarding the determinants "professional" contact with the public and strong mode part of work were significant respectively ( $p = 0.0017$  and  $0.0042$ ). Moderators of stress for the multivariate analysis recognized two subscales of bad training ( $p < 0.01$ ) and conflicts of values and perceived value ( $p = 0.02$ ). Mental suffering in the service sector is high. Preventive actions to reduce or eliminate risk factors to directly influence the environment and source of work include more relevant training, better organization of work, and recognition of work done.



#### **P43: Detrimental Effects of Workplace Bullying: Impediment of Self-Management Competence via Psychological Distress**

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Emotional intelligence has been claimed to relate to various positive outcomes, such as organizational effectiveness, commitment, morale, and health. Longitudinal studies demonstrated that the competencies of emotional intelligence may change and develop over time. Researchers argued that work relationships are important for the development of emotional competences, but the usefulness depends on the quality of the relationship. Workplace bullying is considered to be one of the most stressful phenomena in the workplace that is an example of dysfunctional and toxic relationship that has detrimental effects on individual's physical and psychological health. It may be hypothesized that its presence in the workplace impedes the development of a target's abilities of emotional intelligence. Hence, the objective of the present study was to analyze the relationship linking workplace bullying, psychological distress and self-management competence of emotional intelligence. More specifically, we tested part of the Cherniss and Goleman (2001) model in which they argued that individual emotional intelligence is a result of relationships at work. In addition, we extended the model by proposing that the relationship between exposure to workplace bullying and the competence of self-management is explained by psychological distress.

Exposure to workplace bullying was measured using the Italian version of the Negative Acts Questionnaire-Revised (NAQ-R: Einarsen et al., 2009). Psychological distress was evaluated using the 12-item Italian version of the General Health Questionnaire (GHQ: Goldberg, 1992). The ability of self-management was measured using the Scale of self-management from the Organizational Emotional intelligence Questionnaire (ORG-EIQ, Giorgi & Majer, 2009). The scale of self-management included two competencies of emotional self-control (6 items) and eagerness (5 items) (Giorgi & Majer, 2009).

Data analysis of 346 participants (80.9% were male and 19.1% were female) from two private sector organizations in Italy demonstrated that psychological distress fully mediated the relationship between workplace bullying and the emotional intelligence ability of self-management. The present study findings point to the idea that not only emotional intelligence may assist in handling exposure to workplace bullying, but exposure to workplace bullying may impede emotional intelligence via psychological distress.

#### **P44: Workplace Bullying and the Role of Organizational Practices**

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Bullying at work is a complicated process with multiform causes, and a serious work-related health risk. Studies have shown that various features of psychosocial work environment, for example role conflicts and role ambiguity, high workload and high control over one's work, lack of participation in decision making, substantial changes at work, and destructive leadership style may trigger bullying at a workplace. It has been suggested that the role of organizational culture is important for understanding the onset and escalating process of bullying. Organizational culture may include features that enable, or even reward bullying. On the other hand, organizational practices may include methods and joint rules that prevent and inhibit the emergence and escalation of a bullying process. Research on the associations between the features of organizational culture and workplace bullying has so far, however, been scarce.



The aim of the "Harmonious Work Community - towards zero tolerance of workplace bullying" - research and intervention project (2014-2016) is to support the development of an organizational culture which does not accept inappropriate behavior and bullying at work. The study part explores the connections between the operational culture of an organization and organizational practices, and the onset of inappropriate behavior and bullying at work, as well as intervening in situations where bullying has taken place. The multilevel intervention part is carried out in three levels: 1) management and HR, 2) supervisors and 3) work groups. Pre- and follow-up surveys are carried out to measure the effectiveness of the interventions. Six organizations from different occupational sectors participate in the project. Pre-intervention survey was conducted in spring 2015 among the whole personnel of the participating organizations. Of the 1501 respondents 84% were women. In all, 4% experienced themselves as targets of bullying, and 35% reported that they had observed inappropriate behavior in their workplace.

Observed bullying was found to be less common in organizations where the distribution of working tasks is perceived as equal, employees appreciate one another, opinions of employees are listened to, decisions made by the nearest supervisor are consistent. Half of both supervisors and employees reported that experience that bullying at work is a sensitive subject and a subject that is difficult to talk about is the most common factor which hinders interference in bullying. Both supervisors (42%) and employees (49%) also suggested that haste is a significant hinder. Of the employees 52% reported that "it is not my business" as a prevalent mindset hinders interference in bullying. Often also those experiencing bullying do not want to discuss the situation.

The study showed also that intervening in observed bullying is not easy. Of the respondents, 63% reported that in case of observing inappropriate behavior they try to stay as outsiders. Reasons for this were most often ignorance on how to act, and thoughts that those involved should handle the situation by themselves. The results of the survey will be presented and discussed.

#### **P45: Older Physiotherapists and Uncertain Futures**

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With the average age of the NHS worker continuing to increase (currently 43) and ever increasing demands for services, speculation exists as to whether an ageing workforce will have the capacity to work to the same physical and psychological demands currently asked of them. If we are to understand and characterise employee beliefs surrounding capacity in later working life, the perspectives of physiotherapists have particular significance. This is because the Physiotherapist is a maintainer of mobility, and an expert in body mechanics with expertise in injury treatment, prevention and management, and should be a professional group in which stereotypical beliefs about older workers physiological capacity might be expected to be least prevalent. But rather than seeking to add to established debates surrounding (in) capacity to work per se, this poster will describe a study where the emphasis will instead be placed on the characterisation of employee beliefs about physical and psychological challenges of ageing and resilience and importantly, their impact on beliefs about their future. Beliefs (substantively accurate or otherwise) are important, as they impact on individual attitudes, orientations and behaviour. Where shared, they can come to assume the status of cultural norms, attitudes, and practices. Consequently the research will aim to explore (a) the impact of working in later life and beliefs within the physiotherapy profession (b) the interplay between stereotypes, experiences of job demands, physiological and psychological resilience. The approach taken will be of qualitative focus groups with National Health Service (NHS) physiotherapists. The analysis will be interpretative. The findings for research and policy will be discussed.

## **P46: Gender Differences in Conscientiousness among Leaders in Kuwait**

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**Background:** Gender differences in personality are often examined in terms of the Five Personality Factors Model. This model is comprised of five factors: Neuroticism, Extraversion, and Openness to Experience, Agreeableness, and Conscientiousness. Conscientiousness describes traits related to competence, order, dutifulness, achievement, self-discipline, and deliberation. Women score somewhat higher than men on some facets of Conscientiousness, such as order, dutifulness, and self-discipline. These differences, however, are not consistent across cultures, and no significant gender difference has typically been found in Conscientiousness at the Big Five trait level.

**Method:** The participants were 800 first year Kuwaiti leaders: 422 males mean age =  $49.77 \pm 4.57$  and 378 females; mean age =  $45.61 \pm 2.59$ ). Standard Arabic Versions of the Conscientiousness Scale derived from the NEO-PI-R were administered to leaders who occupy Manager, Vice Manager, and Head Section positions at the private and government sectors in Kuwait. Reliabilities (Cronbach's alpha) were .84 for male leaders and .80 for female leaders for the NEO-PI-R-C denoting good internal consistency. Principal component analysis (PCA) of the six Conscientiousness facets (competence, order, dutifulness, achievement, self-discipline, and deliberation) showed that a one-component solution explains 56.92% of the total variance for male leaders and 51.21% for female leaders.

**Results:** Female leaders had significantly higher scores than male leaders in order ( $F=21.18$ ,  $p<.000$ ), dutifulness ( $F=8.45$ ,  $p<.004$ ), self-discipline ( $F=9.25$ ,  $p<.002$ ), and an overall conscientiousness ( $F=5.36$ ,  $p<.02$ ). Therefore, it is safe to conclude that gender differences overshadow similarities. Female preponderance of conscientiousness has been a consistent finding within literature.

**Conclusion:** These findings suggest that gender differences conscientiousness are robust. A possible interpretation with the present data is a "social desirability artifact" hypothesis. The artifact account ascribes gender differences to biases in measurement rather than actual differences in conscientiousness.

## **P47: Working Women: Obstacles and Challenges in Career Planning**

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The present study examined work-related barriers women are faced with, and the association among their age, marital status, number of children and work-related discrimination. The results were gathered from surveying 246 randomly selected working women in Cyprus, ages 23 to 60; one third were single, 60% had children, 60% were working in the private sector, 37% belonged to the age group of 22 to 30; 46% to the age group 31-40 and 17% over 40. The results denoted several barriers which appear to play an important part in preventing women, successfully advance in their careers. The results showed (in priority order) that these barriers were: women's low levels of self-confidence, non-supporting spouse, company's lack of ability to implement and enforce anti-discriminatory and gender equality legislation; male domination in senior organizational positions; company's lack of commitment to gender advancement; tendency for organisations to assign male employees on high visibility projects; working hours that do not facilitate parenting; absence of equal career development opportunities for women and lastly insufficient women role models in higher organisational levels.

Furthermore, 50% of the participants reported that 'women have to perform better than their male colleagues to be promoted to the same position'. Likewise, when looking at 'absence of equal opportunities for advancement to higher positions', the group of participants with children agreed at a stronger level than the ones with no children. Additionally, it appears that the older the participant (over 40 years old), the stronger the belief that 'unequal opportunities' exist related to advancement to higher positions.

The results to the question related to the level of agreement of the participants with the 'equal level of capability of women with men in the same positions' showed significance. The group of participants with no children agreed strongly with the statement. Would having children influence women's work capabilities? Statistical significance was shown between the married and the single participant groups; the married group reported undecided as far as the 'commitment of a woman with children towards her career' is concerned, and the single group of women reported agreement. Furthermore, when comparing the groups of participants with children and the ones with no children as far as 'commitment is concerned when they have children', the group with no children agreed while the one with children reported undecided.

Additionally, the majority of these women had experienced some kind of career advancement barriers, these were very clearly documented in their responses to questions which examined the participants' level of perception on the degree to which their gender limits their promotions, compensations, access to clients and access to training and development programs; at this point they overwhelmingly agreed that their gender limits their promotions (95%), compensation (86.4%), access to clients (88.8%), and access to training and development programs (84%). Lastly, once more the participants overwhelmingly agreed that companies must implement programs that could help women's advancement, such as (in priority order): on-site childcare, mentoring programs, refresher courses when re-entering the workforce after child bearing, and flexible working hours.

#### **P48: Findings from the NIOSH Quality of Worklife Survey: Differences Across Race and Ethnicity**

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With the diversification of the U.S. workforce, researchers and organizations are faced with the need to better understand and address occupational stress and employee wellbeing as it relates to the social environment of work (Pasca & Wagner, 2011). Empirical and conceptual research consistently indicates that occupational stressors and outcomes vary across racial and ethnic groups (Brondolo et al., 2009). For example, studies show that, on average, work-related outcomes such as job and work opportunity satisfaction are less optimal for ethnic minority groups compared to the majority group (Bergman et al., 2012).

We present findings from the NIOSH Quality of Work Life (QWL) survey. The NIOSH QWL survey was administered in 2002, 2006, 2010 and 2014 as part of the General Social Survey (GSS), which is used to collect data on demographic characteristics and social attitudes in the United States. English-speaking adults, aged 18 and older, who indicated that they worked outside the home and were employed for pay in the week previous to the survey or that they were temporarily not working, participated in the survey. The QWL consists of 76 questions covering a wide assortment of work organization issues and health and safety outcomes. Demographic information was self-reported (i.e. age, gender, race/ethnicity, occupation, education, industry, work arrangement, etc.) as part of the GSS core module.

All waves of the survey were combined, and a total sample of N=5888 was analyzed. Roughly 71% of the sample self-identified as Non-Hispanic White, 14% as Non-Hispanic Black, 11% as Hispanic/Latino, 3% as Asian, and 0.9% as American Indian/Alaska Native (AI/AN). About 52% of study respondents were female and the mean age of the sample was 42.6 years (SD=13.29). The mean number of years of education was 14.0 years (SD=2.83). The mean job tenure of the sample was roughly 7.6 years (SD=8.72). Additionally, 80% of participants were employed full-time and the majority of participants were employed in management (36%), sales (22%), and service (21%) occupations respectively.

Results based on four waves of national data indicate that health and safety outcomes vary across racial/ethnic groups, with a number of groups-including non-Hispanic Whites in some cases- suffering significantly poorer outcomes relative to other groups. Although results should be interpreted with caution due to low sample size, AI/ANs seemed to be disproportionately more at risk than other racial/ethnic groups for multiple problems in occupational safety and health. Further empirical research should be conducted to better understand the work organization and other risk factors that impact the different racial/ethnic groups and their health and safety outcomes. Targeted sampling to increase the representation of minority respondents-especially the representation of AI/ANs- in research is needed to further explore the striking disparities identified in this study. Further, training programs to equip supervisors with the necessary skills to manage effectively within a racially/ethnically diversified workforce, as well as health and safety interventions should be developed.

#### **P49: Examining Unwanted Sexual Attention as a Risk Factor for Long-Term Sickness Absence: A Prospective Study Stratified by Gender and Source of Exposure**

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**Introduction:** Unwanted sexual attention at work is defined as sex-related verbal and/or non-verbal acts that are perceived by targets as unwelcome, offensive and unreciprocated. Despite the known association between workplace sexual harassment and unfavourable individual and organizational outcomes, there is currently scarce empirical evidence on the specific link between unwanted sexual attention and long-term sickness absence (LTSA). Increasing knowledge about this relationship is important as LTSA is highly costly to employees, organizations and the society at large. In particular, most available studies are limited as they employ self-reported measures of sickness absence with an unclear identification of absence duration, are cross-sectional and do not distinguish by source of exposure, i.e., co-workers or external users. In addition, evidence on whether the relationship between unwanted sexual attention and LTSA is gender-specific is sparse. We thus aim to prospectively examine the association between unwanted sexual attention and risk of register-based LTSA while stratifying by gender and source of exposure.

**Methods:** We used a pooled sample of 19,366 observations deriving from 14,605 unique participants across three Danish surveys. These studies were linked to the Danish DREAM register providing information on LTSA, which was defined here as a spell of  $\geq 3$  consecutive weeks of absence in the 18-month period after baseline. Participants were asked to report whether they were exposed (yes/no) to unwanted sexual attention in the preceding year and to indicate the source of exposure (co-workers or external users). Data were analysed using Cox proportional hazards models adjusting for repeated measures from double-counted participants. Results were reported as Hazard Ratios (HR) and 95% confidence intervals (95%CI) adjusted for age, occupation, influence at work and work pace.

Results: In the fully adjusted model, unwanted sexual attention from co-workers statistically significantly predicted LTSA among men (HR 2.47; 95%CI 1.32-4.65). Among women, unwanted sexual attention from co-workers was associated with a slightly elevated but non-significant risk of LTSA (HR 1.10; 95%CI 0.60-2.00). Unwanted sexual attention from external users did not significantly predict LTSA among neither men (HR 1.31; 95%CI 0.67-2.54) nor women (HR 0.89; 95%CI 0.52-1.51).

Discussion: The association between unwanted sexual attention by co-workers and LTSA among men may be explained using the "Stress-as-Offence-to-Self" theory (Semmer et al., 2007). In our society, traumas of sexual nature may in general be viewed as less acceptable among men, making unwanted sexual attention a bigger threat to self-esteem in the latter than in women. The associated shame may lead male targets to be less efficient copers by avoiding talking about the problem and taking actions to fix the situation, which may ultimately translate into more health problems and consequent LTSA. Being subjected to unwanted sexual attention by persons outside the organization may not significantly affect LTSA among either sex because employees might to a certain degree appraise the risk of being confronted with deviant behaviours by external users as an event in line with their role expectations.

Conclusion: Preventing unwanted sexual attention at work may contribute to decreasing the risk of LTSA in work organizations, particularly among men.

#### **P50: Service with a Fake Smile and Emotional Exhaustion. Does Emotional Intelligence Matter?**

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Objectives: Management of feelings by employees is regarded as an important aspect in providing services. In most service contexts, employees are expected to express positive emotions and hide negative emotions. Emotional labor (EL) is a deliberate effort undertaken by service workers in order to adhere to organisational display rules when dealing with customers. Hochschild (1983) distinguished two forms of EL: surface acting (SA), i.e., modifying emotional displays without changing internal feelings (service with a fake smile), and deep acting (DA), i.e., changing the emotion felt in order to elicit the appropriate emotional display. Research shows that SA, unlike DA, is associated with personal costs such as burnout. The study was designed to examine the effects of surface acting on emotional exhaustion (EE) while controlling for employees' trait emotional intelligence (EI). It was predicted that EI acts as a moderator in the relationship between SA and EE, in such a way that the relationship is stronger in those lower in EI than in those higher in EI. Dispositional negative affectivity (NA) was included in this study as a control variable.

Method: The data was collected from 180 Polish workers (53.6% female) employed in the service industry. Participants were on average 36 years old and were employed as retail sales assistants and insurance customer service representatives. SA was measured with the Emotional Labor Scale developed by Bazinska et al. (2010). EE was assessed with the subscale of the Polish version (Pasikowski, 2000) of the Maslach Burnout Inventory—General Survey (Maslach et al., 1996). EI was measured with The Trait Emotional Intelligence Questionnaire-Short Form (TEIQue-SF; Petrides & Furnham, 2006; Polish adaptation Szczygiel et al., in press). NA was measured using the subscale of the Polish version (Brzozowski, 2010) of the Positive Affectivity Negative Affectivity Schedule (PANAS, Watson et al., 1988).

Results: To test the hypothesis, moderated hierarchical multiple regression analyses were performed. Predictor variables were entered into regression analyses in three steps. NA Step 1, the "main effects" (SA and EI) in Step 2, and SA x IE product term variable was entered in the Step 3. Results showed that the interaction of SA and IE term was significant ( $\beta = -.27$ ,  $p < .001$ ) and accounted for a significant portion of the variance in EE ( $\Delta R^2 = .07$ ,  $p < .001$ ). As predicted, SA was positively related to EE among employees who were low in trait EI ( $\beta = .79$ ,  $p < .001$ ). In contrast, SA and EE were unrelated among employees who were high in trait EI ( $\beta = .09$ ,  $p = .59$ ). In other words, SA increases EE only for employees low (vs. high) in trait EI.

Discussion: As in previous studies NA was found to be positively related to burnout. Employees who declared greater use of SA during their interactions with customers reported more symptoms of EE. As predicted, this effect was observed only among employees low in trait IE. Thus, this study extends previous findings by demonstrating that the relationship between SA is moderated by EI.

### **P51: 'Working in the Evening Impedes Employee Recovery'... Well, it depends**

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Recovery from work demands on a daily basis is essential to maintain workers' physical and psychological health. To examine the roles of behavioral, cognitive, and individual factors that can adversely affect the need for recovery from work. Relationships between daily unpaid after-hours work, work-related perseverative cognition (WPC; worry and rumination about work-related issues), neuroticism, and need for recovery were investigated. A sample of 49 administrative staff employees completed the surveys before sleep over two consecutive workweeks. Hierarchical linear modeling analyses revealed direct effects as well as interactions between neuroticism, after-hours work and daily WPC on the daily need for recovery. After-hours work and WPC individually and jointly deplete resources amongst employees low in neuroticism. However, the pattern was different for those high in neuroticism. When they reported low WPC, after-hours work was associated with a decreased need for recovery; and the highest need for recovery when no after-hours work was done.

These results suggest that administrative staff employees with high neuroticism could benefit on a short-term basis from the resources gained from after-hours work. These findings bring new insight into the role of personality in workers' recovery. Progress is made in understanding the caveats of generalized, non-individual, stress management strategies by recognizing that, for certain workers, taking work home can be beneficial for their decompression as it may help reduce worry and rumination about work-related issues.

### **P52: Cultural Differences in Burnout Studies: Review of French and Canadian Researches about Nurses' Work Condition**

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Burnout is a well-documented phenomenon and occurs all around the world (Schaufeli, Leiter, & Maslach, 2009). Most researchers are North American and - or use a theoretical framework inspired from North American studies. However, culture influences burnout (Schaufeli, et al., 2009). For these reasons, we suggest a review comparing French and Canadian research on burnout. To avoid impacts of works' particularities, we focused this review on nurses using publications from 2004 to 2015.



After analysis of databases (CAIRN, Sciencedirect, Psychinfo and Pubpsy) and specifically reviews (i.e. @ctivités, PISTES), we selected 7 articles from France and 8 articles from Canada. We made a thematic analysis of articles. We found 4 main themes: "objective" work conditions; "subjective" work conditions; personal resources; work-life balance. In both countries, studies focused on objective work conditions (i.e. schedule, rhythm of work). Their consequences on physical injuries, sleep are only found in French studies. Concerning subjective work conditions, comparison between French and Canadian studies shows that nurses' feeling about work conditions are only studied in France and implies satisfaction (about schedule, rest periods), fears of errors and psychological efforts. Organizational support is studied in both countries and results tend towards the same conclusions, which are good organizational support protects against burnout. Moreover, organizational support implies authentic leadership, avoiding team conflict and bullying, allowing a good control / demand balance, and providing rewards. Personal resources are only studied in Canada; and suggest that burnout decreases when psychological capital is high, and may be avoided by increasing psychological capital (for example, by helping nurses to be more confident in themselves). Link between work life balance and burnout is only found in French studies, including in our sample that finds exposure to poor work life balance is linked with a high perception of burnout.

At the origin, burnout has been studied as a consequence of work environment, as workload for example (Maslach & Jackson, 1981). With time and increasing of knowledge, studies focused more on how perception of work environment may be linked with burnout. In our sample, subjective organization factors are the most studied, 11 papers from both countries include this kind of factor. This may show how important are the perceptions people have about their work. Defining emotional exhaustion as the decreasing of emotional resources (Maslach & Leiter, 2008; Shirom, 2014) also shows that the perception of people is the first step to burnout.

This article was limited to French and Canadian papers. So, its aim is not to have a complete review of burnout, but it is to show some cultural differences on burnout's studies. We found that studies mainly examine subjective work's conditions, then objective work's conditions. Studies in our sample also observe other factors: work-life balance and psychological capital. Even if there are not work conditions, it is possible that they have effects on burnout when they are in interaction with job demands, as moderators or mediators. We propose future studies should include these interactions.

### **P53: Variables of Predictive of Burnout in Nurses of a Public Hospital in Guadalajara, Mexico.**

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Occupational burnout is identified as the result of stressful work conditions in healthcare service providers. Starting with the first tridimensional definitions (Maslach & Jackson, 1982), some questionnaires have been developed to identify the level of disorder; thus the Burnout Scale (Uribe, 2010) designed for the Mexican population offers three dimensions: exhaustion, depersonalization and dissatisfaction with achievements. Consequences of this syndrome affect between 20% and 30% of nursing personnel as evidenced in emotional and behavioral problems, such as: anxiety, depression, hostility, apathy, irritability, mistreatment of users and customers, interpersonal problems, fatigue and physical discomfort (De la Fuente et al., 2015; Ding et al., 2015; Kar & Suar, 2014). The objective of this study was to identify workplace predictor variables of occupational burnout in the nursing staff of a public hospital in Guadalajara, Mexico.



This was an observational, cross-sectional and analytical study. A survey was applied to 149 morning and evening shift employees at a public hospital after using a census. Nevertheless, the record (161) only answers 92% of nurses. They were asked to answer the Uribe Burnout Scale (2010) voluntarily, consisting of 105 items; but only three factors were graded: exhaustion, depersonalization and dissatisfaction with achievements. The predictor variables identified years of seniority, having employees under their orders and service time. The Interpersonal Reactivity Index dimensions (IRI-28: Pérez-Albéniz version, 2003) were also assessed: perspective, fantasy, empathic concern and personal distress, as well as Fatigue (Barrientos, Martinez & Mendez, 2004); drowsiness-heaviness, concentration and physical discomfort; stress symptoms (Yates, 1979); physical and mental; and the Goldberg Anxiety-Depression risk scale (spanish version). The data were analyzed with linear regression using SPSS statistical software.

The fatigue, interpersonal reactivity and stress dimensions were predictors of exhaustion ( $EE = 12.130 + .580 \text{ drowsiness} + .400 \text{ distress} + .699 \text{ physical symptoms}$ ;  $R^2 = .639$   $p < .05$ ). Interpersonal reactivity was a predictor of depersonalization ( $D = 14.363 - .296 \text{ perspective} + .348 \text{ distress} + .166 \text{ service time}$ ;  $R^2 = .145$   $p < .05$ ). Fatigue and interpersonal reactivity were predictors of dissatisfaction with achievements ( $DA = 22.538 + .976 \text{ physical discomfort} - .339 \text{ perspective} + 2.15 \text{ employees under their orders}$ ). Moreover, 21% of the nursing staff was described with exhaustion; 17% with depersonalization and 11% with dissatisfaction with achievements above the medium. Between 10% and 30% of the nursing staff evidenced symptoms of depression, anxiety and mental and physical symptoms due to stress. They mentioned they were fatigued and had a low index of positive interpersonal reactivity.

Variables such as service time, staff under their orders, physical discomfort and interpersonal reactivity were occupational burnout predictors in the nursing staff, which confirms the interactionist model determining personal and workplace conditions as the components of burnout.

#### **P54: Positive and Negative Work Rumination and its Associations with Sleep Quality, Burnout and Relaxing-Substance Abuse**

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The detrimental effect of ruminating about one's work on health-related outcomes such as sleep quality (e.g. Berset, Elfering, Lüthy, Lüthi, & Semmer, 2011), negative mood (Wang et al., 2013) and alcohol-consumption (Frone, 2015) is well established. It is assumed that thinking about a negative event at work will prolong or reactivate the negative emotions and physical activation related with that event ("perseverative cognitions", cf. Brosschot, Pieper, Thayer, 2005). Using the same logic, recent research (e.g. Frone, 2015; Meier, Cho, & Dumani, 2015) is inquiring the question if thinking about the positive side of one's job (positive rumination or work-reflection) can have positive effects. Indeed, first results are supportive of this assumption: Frone (2015), for example, found that positive and negative rumination are inversely related to alcohol-consumption.

We wanted to replicate this contrarian effect and added two other dependent variables: sleep quality and burnout. In addition, we included demands and job control as working conditions predicting rumination. Ultimately, our model consisted of two predictors (demands, control), positive and negative rumination as mediators and "relaxing-substance abuse", sleep quality and burnout as outcomes. We calculated a structural equation model with data from a cross-sectional sample. We tested the model in MPLUS and used scales from Frone (2015; rumination), Semmer, Zapf and Dunckel (1999; control), Demerouti, Bakker, Vardakou, and Kantas (2003; burnout), Krause et al. (2014; relaxing-substance abuse) and Udris and Rimann (1999; demands).

The fit of the final model was acceptable (chi-square=498, df=304,  $p<.01$ , CFI=.929, SRMR=.054, RMSEA=.048). Burnout was directly predicted by negative rumination ( $\beta=.49$ ,  $p<.001$ ), positive rumination ( $-.31$ ,  $p<.001$ ) and job control ( $-.16$ ,  $p<.05$ ). Sleep quality was predicted by negative rumination only ( $-.28$ ,  $p<.001$ ). Relaxing-substance abuse was predicted by negative rumination ( $.26$ ,  $p<.01$ ) and demands ( $.16$ ,  $p<.05$ ). Positive rumination was neither predicted by control nor demands. Negative rumination was predicted by both demands ( $.15$ ,  $p<.05$ ) and control ( $-.21$ ,  $p<.01$ ). Control was not related to demands. Negative rumination was correlated with positive rumination ( $.24$ ,  $p<.05$ ). Sleep quality was negatively correlated with relaxing-substance abuse ( $-.19$ ,  $p<.05$ ) and burnout ( $-.22$ ,  $p<.01$ ). Relaxing-substance abuse and burnout were not related, however.

Unfortunately, due to the cross-sectional nature of the sample no causal interpretations can be done. There is some support for the assumption that positive rumination could be as positive as negative rumination is negative: both are related to burnout in the assumed direction. Overall explained variance in burnout was 37%, which is considerable. Sleep quality and relaxing-substance abuse are only predicted by negative rumination, however. Although the substance abuse is done in order to relax, it seems to be detrimental for a good recovery as shown in the negative association with sleep quality. Somewhat surprisingly, the effects of working conditions on negative rumination were quite small and not even significant for positive rumination.

#### **P55: Study of Burnout among Physicians of University Hospital Centre of Sidi Bel-Abbès City (Algeria)**

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**Introduction:** Burn-out reflects emotional exhaustion, depersonalization and reduced personal accomplishment that appear in individuals professionally involved with others.

**Objectives:** The objectives of this research were to estimate the prevalence of burnout among practicing physicians in the various services of the University Hospital of Sidi Bel Abbes, and to identify the sociodemographic factors, the professional and the personal correlates of the three components of burn-out.

**Method:** A cross-sectional descriptive study was conducted from December 2014 to May 2015 with 542 physicians in University Hospital Centre of Sidi Bel-Abbès city. The investigation support is an anonymous questionnaire self in two parts: The first part evaluated the characteristics of physicians; the second part evaluated burnout using Maslach Burnout Inventory (MBI) in its French version (Canoui, 2008).

**Results:** The response rate was 50.36%, with a female predominance (58.8%). More than half of the population were single (53.8%) with a mean age of  $31.19 \pm 5.18$  years. The main somatic complaints included headaches (53.8%) and sleep disorders (52.3%). Over two thirds of our population (72.9%) were affected by burnout, of which 67% had high levels of emotional exhaustion, 43.5% had a high level of depersonalization, and 55% felt less accomplished in their work.

**Conclusion:** The phenomenon of burnout is a reality in Sidi Bel-Abbès.

## **P56: Occupational Burnout among Nurses in Hungary: An Exploratory Analysis of Demographic and Occupational Factors**

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**Introduction:** Health care professionals are at an elevated risk for burnout and job dissatisfaction. Moreover, there is a dearth of evidence regarding the psychosocial factors (e.g., burnout) that impact nurses practice environment in Hungary. Burnout among workers is categorized by feeling extremely overextended and depleted of one's emotional and physical resources in response to chronic job stressors. The issue is recognized as complex and multifaceted and affects every sector of nurses work environment and the overall healthcare sector in the country. The aim of this study was to describe factors related to burnout among nurses in Hungary.

**Methods:** A cross-sectional survey used a self-administered questionnaire. Respondents (n=196) working in Southwestern Hungary were invited to participate in the study. Descriptive and multiple regression analyses were used to consider the emotional exhaustion, depersonalization and personal accomplishment scores in relation to the following: 1) demographic factors, and 2) occupation and career satisfaction factors.

**Results:** Completed questionnaires were received from 196 respondents (78.4% response rate). The mean age of nurses was 42.1 (SD=9.00). The majority of the respondents are female (91.4%), married (61.4%) and have two children (33.3%). In the demographics model, family size was statistically related and contributed negatively to emotional exhaustion (p=0.01) and depersonalization (p=0.01) scores. In the occupation and career satisfaction model, education attainment (p=0.019) was positively related to emotional exhaustion scores. Nurses intent to leave their profession (p<0.001) was a positive factor related to depersonalization score among nurses.

**Conclusion:** Preventing nurses' burnout in the Hungarian health care system will mitigate deleterious health consequences and promote a healthy work environment. Moreover, the findings of this work may improve the shortage of nurses in the country through improved recruitment retention strategies.

## **P57: Could Specific Work Tasks Add Fuel to the Fire? On the Hierarchical and Multidimensional Nature of Teacher Motivation in Relation to Job Burnout**

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It is widely assumed that the most highly motivated employees are riding a fast track to burnout. This assumption is based on the premise that in order to burn out, employees must first be "on fire" (Maslach, Schaufeli, & Leiter, 2001). However, this assumption is incompatible with the consistent finding in the literature that adaptive motivational resources (e.g., achievement motivation, self-efficacy, internal locus of control) are negatively associated with burnout (e.g., Alarcon, Eschleman, & Bowling, 2009; Halbesleben & Bowler, 2007). An emerging body of research has nuanced this position, suggesting that the quality of employees' motivation-the reasons that drive employees to invest in their work-may render them more (or less) vulnerable to job stress and burnout (Fernet, Lavigne, Vallerand, & Austin, 2014). More specifically, some studies indicate that teachers who engage in their tasks for the enjoyment and satisfaction or because they fully endorse their importance and value (i.e., autonomous motivation) are less likely to burn out. In contrast, teachers who engage in their tasks in order to avoid internal or external pressures (i.e., controlled motivation) report more burnout (Fernet, Austin, & Vallerand, 2012; Fernet, Senécal, Guay, Marsh, & Dowson, 2008).

Among the issues considered in the literature on teacher motivation and burnout, the specificity of the motivational constructs that best capture the relationship between work motivation and burnout remains unclear. This issue is important for both the research and theory on burnout and work motivation. Whereas burnout is conceived as an individual experience arising from work (Maslach et al., 2001; Shirom, 2003), there is little theorizing on the relevant levels (job or task level) of motivation and how these levels relate to burnout. A more comprehensive theoretical understanding would help determine whether teacher burnout is attributable more to motivational disengagement from the job in general or from specific tasks (e.g., teaching, class management).

Drawing on a hierarchical (job and task level) and a multidimensional conceptualization of work motivation (intrinsic, identified, introjected, and external regulations), this study examines the relations between motivational regulations and burnout. Participants were 806 French-Canadian teachers working in public elementary and high schools. Results reveal different associations between burnout and the regulations that drive teachers to engage in their overall job or in specific tasks: autonomous regulations (intrinsic and identified) are negatively associated with burnout but more negatively at job level than task level, whereas controlled regulations (introjected and external) are positively associated with burnout but more positively at task level than job level. This study provides valuable insights into how teachers' motivations toward both the job and tasks can foster or prevent burnout symptoms. Implications for theory and research on burnout and work motivation are discussed.

### **P58: Organizational Factors and Burnout among Nurses: A Systematic Review**

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**Background:** With poor employee retention leading to high demands in the health care sector, specifically, in nursing, occupational burnout has become a prominent outcome. Due to the multifactorial complexity of understanding risk factors most closely related to burnout, a recent and a comprehensive review of the literature is required

**Objective:** The aim of this study is to synthesize the most recent existing research and examine the relationship between organizational factors and burnout among nurses through a systematic review.

**Methods:** For the purpose of this study, an organizational factor is operationally defined as any workplace-related variable that has been identified as a predictor to burnout. Additionally, burnout is defined as a physical and/or mental breakdown; which lead to variables such as depression, fatigue, and/or sickness absence. A literature search was conducted in five databases (i.e., Google Scholar, CINAHL, PsycINFO, ProQuest, & PubMed) using a combination of keywords: nurses or nursing, and risk-factors or predictors, risks, factors, and lost time, absence, depression, anxiety, stress, burnout, disability, fatigue, sickness found from 2007 to 2014 in the English language.

**Results:** Initial search detected 952 articles. After excluding duplicates, conducting rigorous screening and appraising quality of each study, a total of 37 articles were included in this review. Results revealed that organizational factors play a key role in determining the prevalence of burnout among nurses. Such factors included private vs. public health care system, where the private sector presented with more resources for their staff. Self-reported job stress was also strongly correlated with burnout. Additionally, depending on the unit placement

of the nurse, ethical dilemmas have been found to result in emotional exhaustion. Due to nursing shortage, it was identified that higher demands are placed on the nurse, which led to burnout. The relationship between the nurse and colleagues, including other nurses, managerial staff, and other health care professionals predicted burnout. Likewise, the relationship between the nurse and the patient, including violence has been identified as a risk. In terms of job tenure, it was identified that those who had more training opportunities and possess more experience are less likely to experience burnout. Shift work, which include, rotating shifts, prolonged shifts, and/or irregular shifts were identified as risk factors leading to poorer mental state, and jeopardize patient care, which ultimately result in burnout.

Conclusions: While this study sought to examine the relationship between organizational factors to burnout, the results closely resemble less recent findings. Thus, we recommend for organizations and employers to further understand the needs of the nurses to avoid poor health outcomes.

**P59: Burnout and General Health Condition among Hungarian Health Care Professionals**  
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Introduction: This study explored the relationship between general health condition and burnout among professional health care staff. A representative sample of professional health care staff (n = 183) including registered nurses, and personal support workers completed a self-report questionnaire measuring demographic factors, work related information, general health condition (The General Health and Health Conditions - modified subscales of NIOSH Generic Job Stress Questionnaire) and burnout (MBI, Maslach and Jackson, 1981). Burnout is a significant problem worldwide in all health care service areas and it also affects the individual's physical health. This study aimed to highlight the relationship between the burnout symptoms and general health problems like headaches, high blood pressure, insomnia, stomach and back problems.

Methods: Using a cross-sectional survey design, 250 nurses were invited to participate in the study. We had 183 fully completed questionnaires which were returned and analysed. Logistic regression model were used to determine burnout (depersonalization, personal achievement and emotional exhaustion) in relation to selected health outcomes.

Results: The average age of respondents was 42.1 (SD=9.00). Most nurses were females (91.4%) and had completed high school (41.2%) and were registered nurses (29.0%). The MBI results showed that subscales of emotional exhaustion and depersonalization were in the moderate range and scores on personal accomplishment were associated with higher levels of burnout in our sample. Experienced distress symptoms (OR 2.01, 95% CI 1.00-4.11) were associated with emotional exhaustion among nurses. Moreover, the likeliness of mood instability (OR 2.75, 95% CI 1.03-4.29), feeling stressed (OR 2.10, 95% CI 1.03-4.29) and migraines (OR 3.15, 95% CI 1.53-6.48) were significantly associated with depersonalization.

Conclusions: This study provides preliminary evidence regarding burnout in the context of nurses working in Hungary. Results underline the negative effect of burnout on general health condition and well-being of nurses. Moreover, interventions that mitigate burnout in the work environment of nurses are warranted to improve nurses' work conditions and health.

## **P60: Workplace Stress, Burnout and Violence: Teachers as Victims**

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Stress and workplace violence are long established, however, research is lacking regarding Kindergarten (pre-1<sup>st</sup> grade) through High School (Grade 12) teachers as victims of workplace. While the majority of literature in the schools focuses on bullying between students, the focus of this research was on workplace violence targeted at teachers by administrators, parents, students, and other teachers. This research was conducted within a public school in the Southwestern United States. Participants completed: demographic information, a workplace harassment survey (Bauer et al., 2007), the Compassion Fatigue and Compassion Satisfaction scale (Stamm, 2009), and the Maslach Burnout Inventory (Maslach, Jackson, & Schwab, 1986). Results of the instruments informed development of an intervention.

The intervention centres on a triadic model for reducing workplace violence. Participants are first trained in the detrimental aspects of stress and burnout. The teachers next learn about the different types of workplace harassment and violence. They brainstorm on different types of actions that constitute the harassment and violence. The training continues with communication-based exercises to assist teachers when faced with workplace violence. The various components of the model are learned via group-based activities. The model and interventions will be presented.

## **P61: A Theoretical Perspective on the Mediating Role of Mental Clarity in the Relationship between Health and Cognitive Processing**

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Background: Previous research has linked health to cognitive processing. Cognitive processing is an important predictor of performance in the workplace and, thus, plays a role in the productivity of organisations and for the well-being of individuals. However, the processes involved in the link between health and cognitive performance outcomes are unclear. Two possible underlying influences linking health and cognitive function are described in the literature on (a) sickness behaviour and in the literature on (b) executive function. Sickness behaviour is a term used to describe bodily and psychological responses to illness. The physical process here involves the body responding to threats by releasing pro-inflammatory proteins called cytokines. The effects of increased cytokine levels include, among other effects, a suppression in one's ability to concentrate and a depression of mood. Executive function is a term used to describe the underlying cognitive processes that guide behaviour, particularly in non-routine cognitive tasks. Given that sickness behaviour has been related to cognitive performance; by implication, sickness behaviour is likely to be related to executive function. However, the process by which sickness behaviour and executive function relate to outcome cognitive performance is unclear. A possible common linkage between health and cognitive performance could be explained by an emerging research stream on mental clarity, defined as a "clouding of mental operations" (Leavitt & Katz, 2011, p. 445).

Study Aim. Based on the extant literature, we present a theoretical model of how mental clarity possibly relates to both health and cognitive processing. Our suggestion is that mental clarity plays a mediating role in the relationship between health and cognitive functioning. Specifically, we hypothesize that symptoms of illness invoke a sickness behaviour-related response within the individual, which depresses mental clarity. We propose that this reduction in mental clarity, in turn, reduces an individual's capacity to process cognitively demanding stimuli.



Method and results: We review the literature on mental clarity, sickness behaviour, and cognitive processing and present a theoretical mediating model. The aim is to test this model empirically using latent modelling techniques. Data collection is currently ongoing.

Discussion: The model proposed here will be considered in light of the available literature from a multi-disciplinary perspective. Implications for future research and workplace practices will be proposed.

## **P62: Thoughts Concerning Research on the Consequences of Job Stress for Teachers**

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This paper examines research bearing on the impact of the job-related stressors to which teachers are exposed. Three types of research are described, large-sample epidemiologic research, more commonly seen cross-sectional designs, and longitudinal research with at least two waves of data collection. We also examine the most commonly used dependent variables, psychological symptom scales (e.g., the Center for Epidemiologic Studies Depression Scale) and burnout measures. Two problematic aspects of epidemiologic research on teachers include (a) identifying the appropriate group or groups to whom teachers should be compared and (b) mixing teachers together with other groups of workers (e.g., librarians) making it difficult to identify issues specific to teaching. The results of epidemiologic research have been mixed, showing both average, and above and below-average prevalence rates of mental disorder in teachers. Studies with large samples of workers, however, point to the conclusion that teachers, compared to other occupational groups, are at a higher risk of exposure to workplace violence.

The most commonly conducted type of research on teachers are cross-sectional studies, generally with samples of fewer than 400 participants. These studies are useful because they tend to demonstrate that job stressors and psychological symptoms covary. One recent meta-analysis showed that the average correlation between stressors and strains was 0.25. A key limitation of the cross-sectional design is that it does not allow the investigator to establish the temporal priority of the stressors over the strains.

A preferred type of within-teacher longitudinal study assesses stressors and strains at time 1 (T1) and again at time 2 (T2), and examines the relation of T1 stressors to T2 strain controlling for T1 strain. Such a study can assess reverse causal effects as well. Some within-teachers longitudinal research has found that the job stressors to which teachers are exposed predict higher levels of depressive symptoms and somatic complaints. Longitudinal research linking job stressors to burnout, however, is less conclusive. Recent research suggests that burnout scales index of job-precipitated depression. Research on the effectiveness of emotion- and problem-focused coping in reducing the exposure to job stressors or attenuating their impact has been weak.

We conclude that owing to methodological limitations much of the research on teacher stress does not lend itself to drawing cause-effect inferences. We found that only a small number of studies are designed well enough to allow us to conclude that job stressors (e.g., student fighting, the threat of violence) adversely affect teachers' psychological well-being although such an inference is intuitively appealing. The best designed longitudinal studies on teachers' coping efforts suggests that such efforts are ineffective.



### **P63: My Well-Being in My Own Hands: Experiences of Beneficial Recovery during Burnout Rehabilitation**

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**Objective:** The aim of the study was to explore how clients experienced their recovery and what they found beneficial during burnout rehabilitation.

**Intervention:** The intervention was a discretionary medical rehabilitation. The Finnish social insurance institution both funds rehabilitation services and provides income security during participation in rehabilitation. It includes a comprehensive evaluation of an employee's physical, psychological, and social conditions by various rehabilitation professionals (physician, psychologist, physiotherapist, and social worker). The rehabilitation activities focus mainly on enhancing individual resources and supporting individual occupational health and well-being solutions and coping strategies. The clients themselves sought or were referred for a burnout intervention by their occupational health care service. Potential clients were initially screened by the local branch of the state social insurance institution, after which a physician from the rehabilitation center made the final selection. To be eligible for the burnout rehabilitation, applicants had to be employed, but they could be on sick leave. The intervention was carried out in groups of 4-10 employees, and lasted for 15 days altogether, starting with a 10-day period and ending with a 5-day follow-up period within at most 7 months after the first period

**Methods:** Twelve clients whose burnout levels had declined during rehabilitation participated in the study and were interviewed at the end of the second period of the rehabilitation programme. BBI-15 (Bergen Burnout Indicator) was used to define the decline of burnout levels. Semi-structured interviews were used as the main material of the study and were analysed by content analysis.

**Results:** The analysis resulted in one core category, Well-Being in my Hands, and four categories. The core category describes the overall process of recovery and the revelation that clients are in charge of their well-being. It starts with Support from rehabilitation professionals, the group and family or friends. The categories Awareness and Approval refer to specific changes in attitude and recognition of one's needs and limits. The category Regained Joy describes the culmination of the recovery process visible in different spheres of life.

**Conclusion:** Rehabilitation courses proved to be particularly beneficial for individuals suffering from burnout. The accumulation of support, awareness and approval lead to a revival of joy in life and a more active control of one's well-being.

### **P64: The Influence of Workplace Stress, Pension, and Work Arrangements on Age One Plans to Retire**

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Retirement has implications for both the individual as well as the organization. This may be especially relevant given the impending retirement of the large baby boomer cohort and the newer reality that there is no longer mandatory retirement in Canada. In at least some industries employee retirement, specifically early retirement, is associated with a decrease in

organizational performance (e.g., von Bonsdorff et al., 2010). Retirement for individuals means a significant life change. Retirement may increase well-being for some (Coursolle, Sweeney, Raymo, & Ho, 2010), but may be considered a stressful event for others (Brown, 1994). Reasons to retire have been explored in various settings and countries (e.g., Neacșiu, 2013; Sejbaek, Nexø, & Borg, 2013). A variety of organizational factors have been shown to be related to retirement decisions including work-related stress, job control, and job satisfaction (Böttcher et al., 2013; Olesen, Butterworth, & Rodgers, 2012; Sejbaek et al., 2013; Warren & Kelloway, 2010). Retirement pensions have also received attention (Winkelmann-Gleed, 2012).

Using data (N= 8,351) from the Stats Canada Survey of Older Workers (2008), this study examined the influence stress, having a workplace pension, and work arrangements have on an individual's planned retirement date. Using a logistic regression we found that having a workplace pension predicted whether or not individuals have an age in mind in which they plan to retire from their current job, such that those with a pension had a specific age in mind. Stressful days at work moderated the relationship between having a retirement age in mind and having a workplace pension such that the relationship was stronger at higher levels of stress.

The presence of work arrangements also influenced when an individual was planning to retire. Specifically, having a pension while working positively predicted the age in a person planned to retire. Having part-time work, working from home and flexible working hours were not significantly associated with planned retirement age. However, stress proved to moderate one of these relationships. In particular, stressful days at work moderated the relationship between age an individual planned to retire and part-time work arrangements such that the relationship was only significant at low levels of stress. Specifically, when stress is low, having part-time working arrangements is associated with planning to retire from current job at an older age.

The measurement of workplace stress was assessed using a single item, as were the other variables used in the analyses. Future research should examine these relationships using established workplace stress scales as well as the influence of other workplace factors that can impact the age one plans to retire. Research should also examine the actual age individuals retire using this model.

Given the impact of retirement on individuals and organizations, it is important to understand reasons for retirement and how they interact with one another. Organizational interventions targeted at stress reduction for older workers may benefit the organization as much as the employees. The results add to the literature and provide valuable information on the influence of work-related variables on retirement.

#### **P65: Work-Related Well-Being and Cognitive Function: Investigating Causal, Reversed-Causal and Reciprocal Relationships**

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Previous studies suggested that decrements in employee well-being may negatively impact employee cognitive functions, which are crucial for daily work activities. These studies have been mainly correlational and failed to shed light to potential causal effects. Furthermore, most studies have focused on health-related indicators of employee well-being (e.g., burnout) neglecting motivational indicators. The purpose of this longitudinal study was to examine the effect of burnout and work engagement on multiple indicators of cognitive functioning over time.

Key cognitive functions assessed in the present study included memory (short-term and working memory), attention control, and executive functions (set-shifting, inhibition, and problem solving). We hypothesized that burnout will lead to cognitive difficulties over time due to a dysregulation of the hypothalamic-pituitary-adrenal (HPA) axis. Based on the broaden-and-build theory, we also expected that the positive emotions experienced by engaged employees broaden their cognitive repertoire enhancing employee cognitive functioning over time.

The hypothesized model was tested in a sample of 111 Greek employees and their close colleagues, who were followed-up over an average period of 12 months. Employees assessed their burnout and work engagement levels at both measurement occasions. Employee cognitive difficulties were assessed through self-report scales completed by a close colleague, and through a battery of cognitive tests of memory, attention, and executive functions at both measurement points.

Hypotheses were tested through path analyses. Regarding burnout, data was best fitted by the reciprocal model, featuring bidirectional negative associations between burnout and cognitive indices (attention and employee-ratings of cognitive failures) over time. Nevertheless, critical ratios for difference tests suggested that the paths from T1 burnout to T2 cognitive function were stronger than the reverse paths. Concerning work engagement, results supported causal effects from T1 engagement to T2 problem solving ability, employee- and colleague-ratings of cognitive failures.

This is one of the first studies to shed light on the causal links between employee well-being and cognitive function. Results have important implications for individuals and organizations highlighting the negative consequences of burnout for cognitive performance and the protective role of maintaining an engaged workforce for employees' cognitive capacities.

### **P66: Emotional Demands at Work and the Risk of Clinical Depression - A Longitudinal Study in the Danish Public Sector**

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**Objective:** High emotional demands (ED) at work may cause an increased risk of depression. However, the use of self-reported exposure measures and proxies for disease has made interpretation of associations difficult. The present study investigated whether different dimensions of ED were associated with clinical depression.

**Methods:** A total of 4389 non-depressed public employees were enrolled in 2007. At follow-up two years later, 3224 (72%) from 474 work-units participated. Participants with high levels of mental health symptoms went through a psychiatric interview (Schedule for Clinical Assessment in Neuropsychiatry, SCAN). Sixty-two cases of clinical depression were diagnosed. ED were examined as measures of perceived ED and of content-related ED (generic and patient-related), individually reported and aggregated by work-units. Odds ratios (OR) of depression were estimated by logistic regression taking potential confounders into account. Positive work factors, i.e. support, meaningful work and enrichment, were considered as potential modifiers.

Results: Individually reported perceived ED was related to depression. The OR<sub>adjusted</sub> was 1.40 per unit increase in perceived ED (95% Confidence Interval: 1.02-1.92). The corresponding analysis based on work-unit data was in the same direction though not statistically significant. Content-related ED did not predict depression in any of the analyses. Meaningful work and supervisor support but not enrichment were independent predictors of a reduced risk of depression. We observed no modifying effects of the positive work environment factors.

Conclusions: The study indicates that the risk of depression associated with emotional demands at work has a stronger relation to personal perception than to the content of specific emotionally demanding work tasks.

### **P67: Occupational Mental Health Protocol for the Primary Healthcare Level**

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Chile has a sustained growth in medical consultations due to mental health problems. According to the 2015 report on public policies, Chile doubles the United States in depressive symptoms, and suicide rates are over the OCDE average. Chile has a Professional Illnesses Act that recognizes the occupational neurosis as a professional illness (PI). In one of the mutual insurances that covers 52% of the workforce (2.5 million), complaints in the last 10 years have increased from 250 in-patients in 2001 to around 1,500 PI in 2014.

This abstract presents the "Occupational MH Primary Healthcare Protocol", which is available nationwide for more than 200 general practitioners (GP) across 93 polyclinics. Medical consultations are estimated at 14,000 in 2015 for one of the most important mutual insurances of the country. The School of Public Health of the University of Chile awarded this Protocol with the 1<sup>st</sup> place as best presentation during a seminar in 2013 for mental health interventions at the primary healthcare level.

This Protocol lasted 9 months in its design. Lead by an occupational psychologist, ITs, GPs, nurses, clinical psychologists and psychiatrists were involved in its design. The aim of this tool is to offer a clinical guideline to carry out syndrome approach and first line clinical management of patients who attend polyclinics for work-related stress problems, subject to PI or Work Accidents (WA) due to psychological violence. The Protocol is designed to be applied in 20 minutes and follow-up each 7 days, GPs are trained to pre-assess risks agents at the patient's workplace. During the consultation, the GP can use a "toolkit" of a variety of first line interventions well documented by evidence, and designed according to a prescription flow, which is based on the patient's work and symptoms functionality.

The first toolkit intervention is based on self-help guidelines. The printed materials tackle depressive and anxious symptoms, workplace harassment, and acute stress disorders as a consequence of violence at work. Also, relaxation guidelines are delivered to the patient as "homework" until the next consultation. Traditional Chinese Medicine is the second prescription available in a predetermined package of 3 x 1 hour sessions, delivered in a 15-day period. Finally, a standardized package of first line medicines has been provided to the polyclinics. Training environment involves the GPs and health team, and also clericals at the frontline who welcome the patient. Information, PI or WA recognition, basic psychotherapeutic skills, clinical empathy and problem solving tips are part of training package.

This Protocol is a serious effort for upgrading clinical standards in occupational mental health in a strong culture of clinical specialists, spreading mental health interventions in primary healthcare settings, and maximizing first-line interventions focusing on early return-to-work. With its implementation, access to occupational mental healthcare has increased 7 times. Key issues at implementing this tool is commitment from the GP and health team leaders; an intuitive IT interface is a "must" when standardization is the objective. Finally, non-clinical tasks delegated to the health team and clericals optimizes time.

## **P68: Psychosocial Hazards at Work: Can We Ignore Personality in Times of Change?**

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**Background:** Ongoing change in workplaces makes the working environment more and more complicated, and thus more and more stressful. Although the role of personality in job adjustment is considered in case of stressful positions, it is not regarded as the tool that might help to reduce psychosocial risks in ordinary professions. The purpose of this study was to examine whether personality traits should be taken into consideration in psychosocial risk management as far as positions traditionally seen as "not stressful" are concerned.

**Material and method:** To explore the health impact of occupational stress two models were built: the first was a simple replication of Karasek's model and the second one includes Cloninger's psychobiological personality model as moderator of the health effect of stress. The data were taken from 379 Polish judicial clerks (stratified sample, geographically adjusted, participants of the Polish TEMIDA 2015 Study, CI 95%). Psychosocial working environment was measured with Psychosocial Working Conditions (Cieslak & Widerszal-Bazyl, 2000). Personality was measured with Cloninger's Temperament and character inventory (Hornowska, 2003), and employee health status was screened with GHQ-12 (Makowska & Merecz, 2004). The health impact of job strain alone and with moderating effects of personality traits was estimated with logistic regression (selection based on the likelihood ratio for the model). The hypothesis was that the second model provides better prediction due to moderating effect of novelty seeking, harm avoidance, persistence, self-directedness and/or cooperativeness.

**Results:** All the correlations between Karasek's model dimensions and general health were statistically important. The first model predicted 11.3% of the psychological disorder elevated risk according to GHQ-12 screening result. The predictors were the Control (9%, OR 0,19 - 0,50; CI 95%) and the Job strain (interaction of Demands and Control). Personality traits also correlated with general health state, i.e. novelty seeking ( $r=0,153$ ,  $p<0,01$ ), harm avoidance ( $r=0,257$ ,  $p<0,01$ ), persistence ( $r=0,198$ ,  $p<0,01$ ), self-directedness ( $r=0,327$ ,  $p<0,05$ ), and cooperativeness ( $r=-0,186$ ,  $p<0,05$ ). Exploration of the second model showed that inclusion of personality traits improves the prediction up to 21.5% due to three personality traits (novelty seeking: OR 0,89-0,99, CI 95%, harm avoidance OR 1,06-1,34, CI 95% and self-directedness OR 0,89-0,96, CI 95%) and two interactions of working environment and personality (persistence with demands and harm avoidance with control). None of the Karasek's dimensions, nor their combination remained a good predictor in the second model.

**Conclusions:** Personality seems to play a functionally important role in job adjustment even in the case of positions traditionally identified as not-stressful. Persistence might be a temperamental risk factor when facing medium or highly demanding psychosocial working conditions of judicial clerks. Harm avoidance can be a temperamental risk factor if judicial clerk is exposed to low to medium control at work. Further studies are needed to explore and better understand the moderating role of personality in the occupational stress context.

### **P69: Occupational Groups and Suicide in Ireland - A Psychological Autopsy Study**

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**Background:** The association of work with mental health is well documented in occupational health psychology research. The role of occupational factors in suicide is less clear. International studies show that suicide rates vary by occupational groups and sectors, health care and agriculture being one of the most affected sectors with high suicide rates. Common explanations of unequal distributions among occupational sectors include access to lethal means (e.g. healthcare workers) or occupational stress factors. An additional explanation may be job insecurity when employed in an occupation with a high unemployment rate. The objectives of this study were (1) to determine whether some occupational groups were over-represented among suicide cases during a period of economic recession/post recession in Ireland (2) and to compare causes of death in suicide cases by occupation.

**Methods:** In 2008, the National Suicide Research Foundation, Ireland established the Suicide Support and Information System (SSIS) using the psychological autopsy approach. In total, 307 cases (275 suicides and 32 probable suicides) were recorded by the SSIS in Cork between September 2008 and June 2012. Using interviews and standardised questionnaires, multiple sources of information were accessed (coroners, family informants, self-report, and health care professionals information) to determine the most recent occupation before death and the means of suicide. Information about the occupation was grouped into main occupational sectors following the Irish Statistical Office classification of occupations, an adapted version of the NACE categories. The analyses are ongoing.

**Results:** Of the 281 cases with valid occupational data, 40.6% (n=114) were employed. 23% had worked in industry, 17% in the construction sector, 14% in agriculture, 14% in services, 9% in distribution and 6% in health care with distinct gender distributions. For example, in women the leading occupational group was health care (27%), in men it was construction (49%). The gender-specific breakdown will be compared with the national average employment statistics of the specified sectors during the period of research to determine whether some of the employment groups were over-represented among suicide cases. The national unemployment rates per occupational sector during that period of time will serve as comparator to determine whether cases were overrepresented in high unemployment sectors (e.g. the construction sector). Hanging (63%), drowning (14%) and self-poisoning (9%) were the most common causes of death with no clear pattern by occupation.

**Conclusions:** Results will contribute to the general understanding of the role of occupational risk factors in suicide and will allow prevention measures focussed to particular high risk occupational sectors/groups.

### **P70: Relationship between Psychological (Eudaimonic) and Subjective (Hedonic) Well-Being with Neurobiological Correlates: Implications for Employee Well-Being?**

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**Background:** Both subjective and psychological wellbeing are addressed as underlying psychological constructs of employee well-being. Despite increasing attention towards links between hedonic and eudaimonic well-being and neurobiological correlates, there is no



systemic review of research addressing these issues. Hedonic well-being refers to a construct including cognitive appraisal of one's life, high levels of positive emotions and low levels of negative emotions (Ryff & Keyes, 1995; Diener & Ryan, 2009). Eudaimonic well-being refers to realization of one's potential and a meaningful life (Ryff & Keyes, 1995). These two aspects of well-being have attracted the interest of researchers worldwide, nevertheless neural correlates underlying these constructs remain unclear. The aim of this research is to overview the current status of research studies analyzing the links between well-being and neurobiological factors. Literature analysis serves as a research method for this study.

**Results/Conclusions:** Recent research studies show that well-being (both hedonic and eudaimonic) are related with neural and biological factors. Higher levels of well-being is related with biological markers or measures (e.g. C reactive protein, waist circumference) which are recognized as risk factors of a number of pathological conditions. Well-being is also found to be related with certain aspects in brain structure (e.g. right insular cortex gray matter volume, left mid-dorsolateral prefrontal cortex gray mass volume), and also with the activity of specific brain zones (e.g. orbitofrontal cortex, cingulate, precuneus) as well as with specific brain activity (for example with Alpha asymmetry). Thus, eudaimonic and hedonic well-being are related to neurobiological factors, however there is a need for deeper and wider research in this area.

### **P71: Positive Organizational Behaviour and Sick-leave in Spain**

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Occupational health experts recognize a broader approach is needed to address the underlying issue of why a worker is absent from work. This perspective is based on the psychosocial holistic model to define illness absence behaviour and return to work, a general framework which proposes that absenteeism is an occupational health outcome resulting from a decision-making process. Therefore, improving wellbeing at work may decrease certified sick leave. We researched sick leave behaviour in workers protected in a Mutual -Spanish National Health System- over several years. We analysed the relationship (p) and measured the relevance of the effect (d) of personal, organizational, labour and environmental characteristics on the indicators of absenteeism. The results show the effect of some variables and a temporal variation of sickness absence behaviour, depending on the day the process begins in the week and also on the month of the year. It is necessary to note that one of the major drawbacks found was the lack of information registered on psychosocial work conditions and characteristics of individuals (psychological capital) in the Certified Sick Leave, which suggests the need to improve these records in Spain. This research shows the importance of studying the influence of psychological and psychosocial conditions on employee absence behaviour as an essential factor for organizational success, given the direct implications of poor employee health and absenteeism on an organization's effectiveness.

### **P72: Enhancing Teamwork and Quality of Care through Personal Professional Development Activities: The Mediating Role of Reflective Thinking**

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The aim of this study was to gain insight into the effects of personal professional development activities on teamwork and quality of care. Personal professional development was defined as learning activities (e.g. coaching, clinical supervision, facilitation) designed to encourage



employees to actively shape their work life and cope better with work demands. Previous research has shown that personal professional development activities are associated with better job performance and work attitudes. The current study adds to this research by focusing on understanding mediating and moderating mechanisms.

Reflective thinking (i.e. the process of analysing one's role and behaviour within the work environment and thinking about ways to improve it) was thought to mediate the relationship between frequency of participation in personal professional development activities, and teamwork and quality of patient care. Perceived usefulness of personal professional development activities was hypothesized to moderate the association between frequency of participation personal professional development activities and reflective thinking.

Participants were 186 registered nurses in a large, metropolitan acute public hospital. They completed a questionnaire consisting of validated measures of action and interpersonal team processes, reflective thinking, overall quality of patient care and proactive patient care. In addition, nurses provided information on frequency of participation in and perceived usefulness of professional development activities. Data were analysed using regression-based moderated mediation analyses.

Analyses confirmed that reflective thinking mediated the relationship between frequency of participation in personal professional development activities and both perceived teamwork and quality of care. Furthermore, the relationship between frequency of participation in personal professional development and reflective thinking was moderated by the perceived usefulness of development activities in that participation in personal professional development activities was only associated with increased reflective thinking if these activities were perceived as useful.

Our results highlight the importance of providing professional development activities that go beyond formal, knowledge- or skill-based trainings. Activities that cater to nurses' personal professional development needs can also lead to improved team and patient outcomes. The results provide an insight into the mediating mechanism between professional development activities and improved teamwork and quality of care. Specifically, participation in personal professional development activities encouraged more reflective thinking which then led to improved team and patient care outcomes. Lastly, this study shows that development activities must be carefully selected, as there is no 'one size fits all': only activities perceived as meaningful would set this process in motion.

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### **P73: Can Quality Management Practices Result in Better Performance Through Enhanced Employee Commitment and Engagement? A Theoretical Model Explained in the Light of COR**

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Quality management (QM) is defined as all management functions determining and maintaining quality policy in organisation. Four components of the quality management principles were examined in the context of company performance. In this poster, I consider conservation of resources (COR) theory as a theoretical basis for explanation the concept of employee engagement.

This conceptual review focuses on the research evidence showing interrelationships between quality management practices and organization performance. The proposed model integrates frameworks that have previously run independently in the QM and engagement literatures. The literature review identified quality management practices that influence research use.

COR theory contributes to understanding the role of quality management practices as source of resources. This poster offers a theoretical foundation to guide further examination of the COR-QM ideas and necessary supports for research use in resource-challenged environments.

### **P74: Does Empowering Leadership Facilitate Work Engagement in Higher Education?**

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**Aim:** To investigate whether and how perceived empowering leadership affects work engagement in higher education using the motivational process of the Job Demands-Resources model. By taking into account three psychosocial work environment factors: perceived level of unreasonable tasks, job autonomy and social community at work, this study aims at providing new understanding of the interaction between empowering leadership, psychosocial work environment, and work engagement in higher education.

**Background:** High quality relies on highly motivated employees. Some researchers argue that there is a tendency within higher education to introduce a managerial-style of leadership with focus on productivity. However, whether, to what degree, and how leadership can help create high quality in higher education is still mostly unknown. An important contribution towards answering these uncertainties is to ascertain the potential role leadership may have for the psychosocial work environment and in helping sustain and promote engagement in higher education. In that regard, empowering leadership could show promise.

**Method:** 6466 employees from three major Norwegian universities took part in this cross-sectional investigation. The participants were recruited in 2014 through the ARK Intervention Programme, which is a working environment and working climate intervention program for higher education, owned and managed by the Norwegian University of Science and Technology. As part of a preliminary examination, we analysed the responses by means of structural equation modelling in conjunction with bootstrap mediator analyses. We are preparing our data for adjustment for shared environment through multilevel analysis.

**Results:** The preliminary results showed that perceived empowering leadership was associated with higher work engagement ( $\beta = .42$ ,  $p < .001$ ). However, as predicted by the Job Demands-Resources model, job autonomy ( $\beta = .15$ ,  $p < .001$ ,  $CI = .13$  to  $.17$ ) and social community at work ( $\beta = .09$ ,  $p < .001$ ,  $CI = .07$  to  $.10$ ) acted as mediators in this relationship. Perceived degree of unreasonable tasks also mediated this relationship ( $\beta = .18$ ,  $p < .001$ ,  $CI = .17$  to  $.20$ ) when job autonomy and social community at work were simultaneously included as mediators in the direct effect between unreasonable tasks and engagement.

**Conclusion:** In sum, leaders in higher education who empower their employees may better the psychosocial work environment and engagement. Future researchers should test these cross-sectional findings using a longitudinal design and consider potential confounding variables such as differences in personality.

### **P75: Effect of Cognitive-Emotional Training on Job Satisfaction and Occupational Wear of Nurses**

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Job satisfaction is a positive or pleasant emotional state resulting from a subjective perception of a person's work experience. Nevertheless, some studies conclude that the relationship between these variables is negative. Therefore, the goal of this investigation was to assess the effect of cognitive-emotional training in improving job satisfaction and in reducing occupational burnout among the nursing staff of a Social Security hospital. A two-phase quasi-experimental study was made of pre- and post-testing of random groups. The first phase obtained a level of job satisfaction and occupational burnout of full-time morning shift personnel at a hospital in Guadalajara. Information was gathered from 100 nurses using the MSL35 Job Motivation and Satisfaction and the Occupational Burnout Scale (OBS). The second phase dealt with the intervention of a cognitive-emotional training program to increase the level of job satisfaction and reduce occupational burnout levels. Two groups were chosen, one for intervention and the other a control group; each with 18 randomly chosen participants.

Significant differences were found in relation to increased job motivation and satisfaction; and in the reduction of burnout and depersonalization between the experimental and the control groups post-test. The size of the effect observed in the treatment group was medium for the motivation dimension ( $d = .68$ ) with a 32% increase; while the burnout reduction dimension ( $d = 0.52$ ) showed a 25% reduction, and the depersonalization dimension ( $d = 0.70$ ) was 33%. The satisfaction dimension was small ( $d = 1.46$ ) although the improvement percentage was 59%. The study concludes the training proved to be adequate for improving job motivation and satisfaction levels as well as for reducing emotional burnout and depersonalization.

### **P76: The Positive Impacts of Civil Aviators' Self-Disclosure Experiences on their Job Engagement and Job Performance**

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A line of evidence has shown the health benefits of revealing or self-disclosure. Based on Kelly (2002), the positive consequences of revealing secrets include "to allow meaningful resolution of secrets", "to avoid suspicions of reciprocal secrecy", to make secrets seem less harmful", and "to enhance liking". In addition, the importance of job engagement (i.e., vigor, dedication, and absorption) is proposed to be the index of job performance. In terms of flight safety and pilots' health, it is of interest to explore the relationships among the positive consequences of revealing secrets and job engagement. A total of 848 civil aviators participated in this study. Most of them are male Taiwanese. The questionnaire consisting of 65 forced-choice items was used in this study. Correlation analysis showed that the relationships among pilots' positive self-disclosure experiences (4 factors), work engagement (3 factors), job performance were all significantly positively correlated. One-way ANOVAs showed that the oldest pilots (50 year-old or older) had the lowest scores on the positive self-disclosure experiences in the four groups. In contrast, the youngest pilots (29 year-old or younger) had the highest scores on the positive self-disclosure experiences in the four groups. Moreover, comparing their scores on the anxiety scale and self-concealment scale in the four age groups, the results had shown that the oldest group had the highest scores on both scales. Taken together, it is suggested and needed to establish the efficiency of stress coping for oldest pilots to enhance their psychological and physical well-beings.

## **P77: Deciding to be Present or Absent when Sick. Interactions between Contextual and Personal Factors**

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To test interactions between contextual and personal factors in relation to sickness presenteeism (SP) and sickness absenteeism (SA). By using Johns' dynamic model of SP and SA this study aims at giving new insight in the complex relationship between SP and SA.

Earlier research have suggested that 1) SP and SA are equal parts of the same decision process and therefore employees may substitute SP for SA; and 2) SP and SA are associated with different antecedents and, therefore, not equal choices when a fully engaged worker is exposed to a health event. In Johns' model presented in 2010 the decision of being sickness absent or sickness present is described by the interaction between a health event, contextual-, and personal factors, and the cumulative consequences of earlier behaviour. To understand more about the relationship between SP and SA it is therefore relevant to investigate how interactions between contextual and personal factors relates to SP and SA. Especially considering that SP may negatively affect both workers' health and organisational productivity knowledge, understanding the relationship between SP and SA is, therefore, of high importance both for researchers and practitioners.

In total, 617 Norwegian employees participated in an on-line questionnaire. The participants were recruited through bachelor students at the Department of Psychology, Norwegian University of Science and Technology, 2013/2014. Relative to the working population of Norway we used criteria of gender, age and occupation to collect our sample. We are preparing our data to conduct two separate regression analyses with SP and SA as dependent variables.

Correlation analyses (Pearson's  $r$ ) from our pilot study ( $N = 200$ ) indicate that contextual factors as workplace norms for presence and job demands was associated with higher SP, while ease of replacement was associated with higher SA. Personal factors, as fearing sanctions by management and colleagues if absent was associated with both higher SP and SA, and job security was associated with higher SP.

As many companies strive to uphold low absence levels insights into the complex and dynamic relationship between SP and SA is of high practical value. By discussing the risk of increasing SP when decreasing SA we argue that understanding the dynamics between SP and SA is important for companies introducing different initiatives to decrease SA.

## **P78: Young Workers in Times of Economic Crises: Health-Related Working Conditions and Occupational Safety and Health Protection in Italy**

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Introduction: As a consequence of current socio-economic and demographic changes new profiles of vulnerable workers emerged with specific needs related to the management of Occupational Health and Safety (OSH). One aspect of change is the shift in the age proportions of the workforce as working life prolongs while it has become difficult for younger persons to enter the labour market - in particular in countries affected by the European economic crises. The level of awareness on this issue is so high to focus the next European

Healthy Workplaces Campaign 2016-2017 on promoting healthy ageing and sustainable work right from the start and points to the crucial role of life-course prevention. Recent public health research has largely focused on the health situation of unemployed while the situation of those who manage to enter the labour market is largely unknown. Therefore, this study aims to investigate the health related working conditions and OSH protection in young workers.

**Methods:** We used a large representative sample of 8,000 Italian workers (46.2% women) from a 2014 survey on perceptions of health and activities related to the management of OSH (INSuLa) conducted by the Italian workers compensation authority. We studied age differences in the distribution of a) health related working conditions and b) in the availability and quality of different aspects of OSH services at the workplace. Measures (perceptions of risks for health, working conditions and OSH services) were collected through a computer-assisted-telephone-interview (CATI). Bi- and multivariate statistics were applied to compare workers under 30 years with higher age groups.

**Results:** The mean age of the sample was 43 years. Out of 8,000 employees, 732 were under 30 years old (9.2%). This comparably low proportion reflects the various barriers for a labour market entry for young persons in the current economic situation in Italy. Young workers had less access to companies' OSH services such as access to an occupational health physician or a safety and health manager and they were less aware of personal obligations in regard to safety at work. Despite this differences in regard to availability younger workers rated the quality of OSH services more positive than their elder counterparts. Precarious employment was more common among the young than in any other age group. Round about 43% reported temporary contracts or informal employment arrangements. Young workers were significantly underrepresented in secure public sector jobs.

**Discussion:** Findings provide evidence of a lack of awareness of personal obligations in regard to OSH on the one hand and limited accessibility of OSH services for younger workers on the other hand. This study suggests new insights for improvements in practical intervention for the empowerment of OSH competencies and workers' involvement in companies' OSH management for young professionals entering the labour market.

### **P79: Development of a New Tool for Paramedics and their Supervisors after a Critical Incident**

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Paramedics are exposed to critical incidents (CIs) frequently in the course of their work. These incidents cause acute distress, and may also result in long-term emotional distress and impairment. Early detection and rapid effective intervention are important goals because CI effects can be cumulative. Nonetheless, very little research has been done on identifying which CIs are likely to result in long term problems, and which early interventions are effective. We will present the results of three studies: (1) predicting risk of later sequelae immediately post-CI; (2) at 2 days post-CI; and (3) effectiveness of a downtime period post-CI. The results of the studies have been published in three separate publications. In this presentation we synthesize the study results and present the resulting tool for front-line and supervisory paramedics.

After completing the demographic part of a survey package on their experience of CIs, 228 paramedics who volunteered from a large urban EMS organization completed a survey concerning a CI they had experienced. The largest portion of the survey was retrospective, in that it asked about experiences at the time of the incident and recovery from distress over the

days and weeks following. Another portion measured symptoms of depression, posttraumatic stress disorder (PTSD), burnout, and stress-related physical symptoms, at the time of the survey. The subjects were demographically representative of the organization, the majority had experienced between one and five CIs, and most of the index incidents were not recent, having occurred at least one year prior to the study. At the time of the study, high burnout scores were the most common (29%), followed by high depression scores (24%), with high PTSD scores the least common (8%).

Our findings were: (1) The paramedic's state of mind before the CI (e.g. stressed, fatigued), and during it (e.g. overwhelmed, helpless) were associated with later high scores on PTSD, depression, and burnout; (2) peri-CI physical symptoms of panic were associated with all outcomes; and (3) if symptoms of acute distress (i.e. irritability, social withdrawal, and insomnia) persisted past the first night post-CI, the relative risk of high symptoms of PTSD, depression, and stress-related physical symptoms was at least doubled. Furthermore, a downtime period, lasting ½ hour to one day (more is better up to a day) was negatively associated with depression scores, but not with other outcomes.

As a result of these findings, and others in the literature (e.g. peritraumatic dissociation predicts PTSD), we developed two sets of cards that EMS workers can keep to use for easy reference. One card is for front-line paramedics and the other for their supervisors/managers. These cards offer a framework and shared vocabulary about what happens at the time of a CI and in the early post-CI period, and the "red flags" to report and inquire about at 2 time points: immediately post-CI and two days post-CI. They also offer suggestions for intervention at each point. Hopefully they will help decrease stigma, increase access to workplace support, and minimize long-term sequelae.

## **P80: Well-Being and Labor: Do Resilience and Meaning of Work Buffer the Job Demands of Midwives?**

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In addition to the emotional job demands entailed in the daily work day of midwives, understaffing, inadequate income, shift-work, insufficient time for women and for completing their duties are just a few of the adversities midwives across Europe deal with on a daily basis. Even so, many remain in the profession and even report high job satisfaction.

According to the Demand-Induced Strain Compensation model, high job demands and lack of job resources lead to reduced subjective well-being and sickness. However, personal resources could diminish this impact. The present study investigated the influence of resilience and meaning of work on the impact of cognitive, emotional and physical job demands and job resources on subjective well-being (composed of positive affect, negative affect, life satisfaction, and job satisfaction) of 550 midwives. For multiple regression analysis three models were created, each including job resources and job demands on qualitative equivalent dimensions. Over all three models resilience ( $\beta_c = 0.465$ -  $\beta_p = 0.481$ ) and meaning of work ( $\beta_e = 0.224$ -  $\beta_c = 0.258$ ) show the greatest effect on the well-being of midwives. While cognitive, emotional and physical job resources have a marginal to small statistically significant effect on well-being ( $\beta_p = 0.063$ -  $\beta_e = 0.113$ ), the interactions between the job demands and job resources ( $\beta_p = 0.002$ -  $\beta_c = 0.052$ ) have no effect. Although organizational and political approaches and changes are urgently needed for midwives, the work of midwives will always include workplace adversities and emotional demands and so resilience training should be integrated into midwifery education and supervision. Building resilience can also potentially enhance the care midwives provide for women.



## **P81: Psychological Assistance Programs for Law Enforcement Personnel: Critical Incident Stress Management in Romania**

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Law enforcement personnel (police officers, gendarmes etc.) often encounter in their activity with intense, traumatic and even life-threatening situations which may induce serious and prolonged levels of stress. Clinically, traumatic events and their impact on individuals are fairly predictable. When a person has been "exposed" to a critical incident, either briefly or long-term, this exposure can have a considerable impact on their global functioning.

Psychological Assistance Programs (PAPs) are intended to help employees deal with stress problems that might adversely impact their work performance, health and well-being. PAPs generally include psychological assessment, short-term counselling and referral services for employees and their immediate family. Preventive intervention after exposure to traumatic events is a subject of increasing interest among mental health professionals. The Critical Incident Stress Management (CISM) in Romanian Ministry of Internal Affairs (MoIA) is anchored firmly in the tradition of crisis intervention and emerging practices in the fields of stress management and psychological resilience.

The purpose of this paper is to present CISM services provided by psychologists to MoIA personnel and families. They are based on a public health model of: primary prevention - increasing resilience to extreme stressors, secondary prevention - mitigating the impact of occupational exposure to extreme stressors and tertiary prevention - follow-up referrals for treatment when a higher level of support care beyond psychological first aid/crisis intervention is required.

Program staff are committed to clinical oversight of services and continuing education for team members. In addition to critical incident intervention, the program offers pre-incident education, guidance in developing peer support teams, interventions to families (i.e. line of duty death), on-site demobilization and defusing to requesting agencies. The main results of this program have consisted in significantly reducing psychological malfunction among the personnel and prevention of PTSD.

## **P82: Training for External Employability to Reduce Temporary Agency Workers' Perceptions of Job Insecurity and its Related Negative Outcomes: An Exploratory Study**

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Perceived job insecurity (PJI) is defined as a subjective phenomenon based on an individual's perception of anticipation of job loss and it appears to have a negative impact on workers wellbeing, both in permanent and in temporary agency workers (TAWs; De Cuyper, Notelaers & De Witte, 2009). Some authors have argued that employability may reduce the likely unfavourable consequences of job insecurity (Greenhalgh & Rosenblatt, 1984; Fugate, Kiniki & Ashford, 2004; Näswall, 2004, 2005; Sverke & Hellgren, 2002) as it provides people with control of being able to change employment if necessary (Baruch, 2001; Kanter, 1993; Berntson & Marklund, 2006).

Referring to the Job Demand Resources Model (Bakker, 2001) our explorative study investigates whether perceptions of TAWs about training to promote their external employability play a role in mitigating their job insecurity perceptions and their exhaustion at work. According



to the JD-R model, job demands refer to aspects of the job that employees consider burdensome (e.g., job insecurity). In contrast, resources have to do with all the aspects related to work that promote control, personal growth, development and learning (Demerouti, Bakker, Nachreiner & Schaufeli, 2001; Hakanen, Bakker & Demerouti, 2005), all of which are evident in the case of employability (Silla, De Cuyper, Gracia, Peiró & De Witte, 2008).

Our hypotheses were tested with a sample of 3981 Portuguese TAWs, of whom 1847 (46.4%) were men and 2134 (53.6%) were women. We performed correlations and data were analysed with hierarchical regression analyses using SPSS 22.0. We verified that the relationship between perceived job insecurity and job exhaustion is reduced by the introduction of training for external employability in the regression, controlling for gender and age.

In agreement with Fugate and colleagues (2004), our findings suggest that TAWs that report to receive training for external employability may be less threatened from potential job loss, making employability an extremely important coping resource. As practical implications, organisations should focus on the development of new skills and knowledge among TAWs to help them deal with job insecurity perceptions (De Witte, 1999; Sverke et al., 2002; van Dam, 2003). This can be achieved through a promotion of formal training programmes by the organisations in dealing with employee insecurity issues (Jawaid Kalyal, Berntson, Baraldi, Näswall & Sverke, 2010).

### **P83: Occupational Stress and Emotional Well-Being in Military Organizations: Behavioral fitness, resilience and on job training as protective factors**

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*Hellenic Military Academy, Athens, Greece*

Military jobs are ranked among the most stressful occupations (Harms et al., 2013). Factors such as physical danger, long periods away from home, physical demands, and being responsible for the lives of others were implicated in this ranking. Stress being significant determinant of performance, emotional wellbeing, and other work outcomes in military settings is not in dispute (Kavanagh, 2005, Meredith et al., 2011). What is more pertinent is the nature of the stressors that service members face and the factors that can mitigate the relationship between stress and work outcomes.

Prior research has identified a number of protective factors that can mitigate the effects of stress on the development of emotional and behavioral health problems in military personnel (Harms et al., 2013) that are often labeled as resiliency factors (Meredith et al., 2011; Wald et al., 2006). Behavioral fitness can be conceptualized as conduct, routines, and habits that promote health and the ability to withstand, recover from, or grow in the face of stressors and resilience (Robson, 2014) while resilience is the capacity to adapt successfully in the presence of risk and adversity (Jensen and Fraser, 2005).

The purpose of this poster is to provide a brief meta-analysis review on contemporary international research data referring to the concept of stress/well being in military settings as well as analyzing training programs that promote behavioral fitness and resilience in the army. The presentation provides a holistic training program outline that is organized into four (4) levels of intervention (individual, family, unit, community) and concludes with suggestions for further targeted research studies.

**P84: Assessing Effort-Reward Imbalance amongst Dairy Farmers: Work Stress is Associated with the Cortisol Awakening Response and Secretory Immunoglobulin A Secretion**

Pennie Eddy, Eleanor Wertheim, Bradley Wright  
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The effort-reward imbalance model (ERI) posits that an imbalance between work efforts and rewards can place employees 'at risk' of stress-related illness. Large scale naturalistic prospective investigations have confirmed this premise with depression and coronary heart disease outcomes. Investigations focussed on predicting the physiological antecedents to such conditions however, has received little empirical attention. The aim of this investigation was to further test the generalisability of the ERI with male Australian owner-operator dairy farmers. In addition, the study sought to assess the relationship of the ERI with pre-clinical biological indices of stress (i.e. salivary cortisol, salivary immunoglobulin A (slgA)) and determine whether the addition of specific owner-operator questions impacted ERI ratios. The study reported here is the first in a series of studies underway by this project group examining related research questions.

Australian male owner-operator dairy farmers (N = 50) provided saliva samples at awakening and 30 minutes thereafter that were assessed for cortisol and slgA secretions. The cortisol awakening response (CAR) was assessed by subtracting the second cortisol assessment score from the waking score. The participants also provided responses to a series of questionnaires that assessed ERI, perceived life stress, personality and the stresses of being an owner-operator.

Unexpectedly, the addition of owner-operator questions to the ERI questionnaire lowered the perception of work stress from an ERI ratio of 0.76 to 0.72 suggesting that the unique stresses faced by owner-operators were buffered by the unique rewards they may experience. Two hierarchical regression analyses with 3 steps (Step 1: age, protocol adherence, Step 2: neuroticism, overcommitment, perceived life stress, Step 3: ERI) were conducted to assess the relationship between the modified ERI with owner-operator questions (ERloo) with CAR and slgA after controlling for demographic, dispositional and beyond work stresses. The findings suggest a strong association between ERloo with the CAR  $F(1, 34) = 7.55, p = .009, \Delta R^2 = .23$ , and the concentration of morning slgA  $F(1, 34) = 17.45, p < .001, \Delta R^2 = .35$ .

Given the stability of the farmers' circadian rhythms, together with the lack of investigation of stress amongst business owners, the findings add unique evidence to the ERI literature. Additionally, the relationship between ERI and pre-clinical indices of ill-health has received much less coverage compared to the assessment of health states, absenteeism and self-reported health for instance and warrants further investigation as it may assist in: (i) identifying individuals at risk of ill-health; and (ii) assessing the efficacy of workplace stress intervention. The strong associations between the ERloo with both physiological indices suggest that changes in occupational stress impacts the hypothalamic- pituitary-adrenal axis and related immune systems. Further research is required to determine if such changes are in fact antecedent to the experience of ill-health, and further if these indices are responsive to workplace stress interventions.

**NOTES**

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